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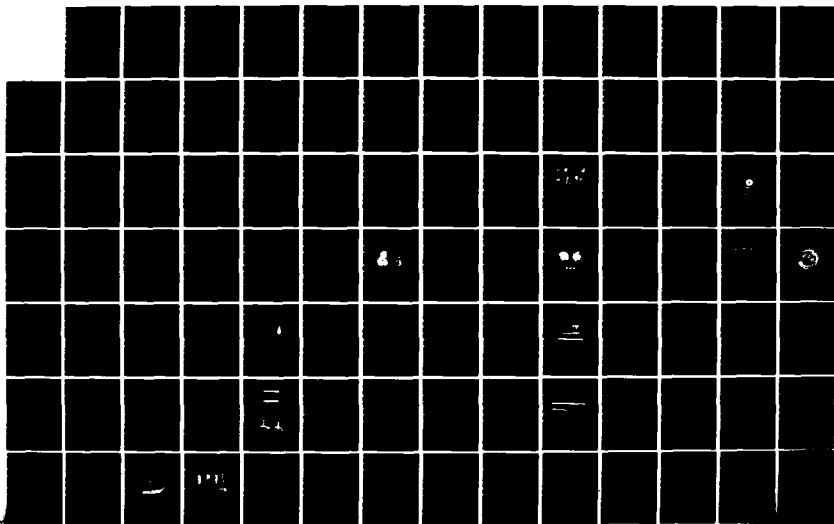
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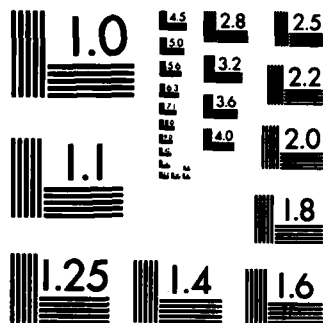
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**22 Lo 741: A NINETEENTH CENTURY  
MULTIPURPOSE LIGHT INDUSTRIAL SITE IN  
LOWNDES COUNTY, MISSISSIPPI**

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by  
**Michael J. Hambacher**

A report on work undertaken with the  
Mobile District, U.S. Army Corps of Engineers,  
in partial fulfillment of Contract No. CX4000-3-0005  
of the National Park Service, Mid-Atlantic Region

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22Lo741: A NINETEENTH CENTURY MULTIPURPOSE  
LIGHT INDUSTRIAL SITE IN LOWNDES COUNTY, MISSISSIPPI

By Michael J. Hambacher

Submitted to

National Park Service  
Mid-Atlantic Region  
143 South Third Street  
Philadelphia, PA 19106

Submitted by

Anthropology Division  
The Museum  
Michigan State University  
East Lansing, MI 48824

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## ABSTRACT

This report presents the results of the excavation of 22Lo741, Lowndes County, Mississippi. Excavation and subsequent analysis has indicated that 22Lo741 was a multipurpose light industrial site dating to the second third of the nineteenth century. Specifically, it functioned as both a cotton gin and a forge/light repair shop. The course of the investigation of the site is detailed from its initial discovery through the development of a research strategy, the excavation, and the analysis. Pertinent documentary data are discussed in addition to a detailed description of the site, the excavation units, and the artifacts recovered. A structural analysis of the extant architectural remains is also presented, along with a general discussion of the relationship between 22Lo741, adjacent nineteenth century sites, and the nearby townsites of Colbert and Barton.

## ACKNOWLEDGMENTS

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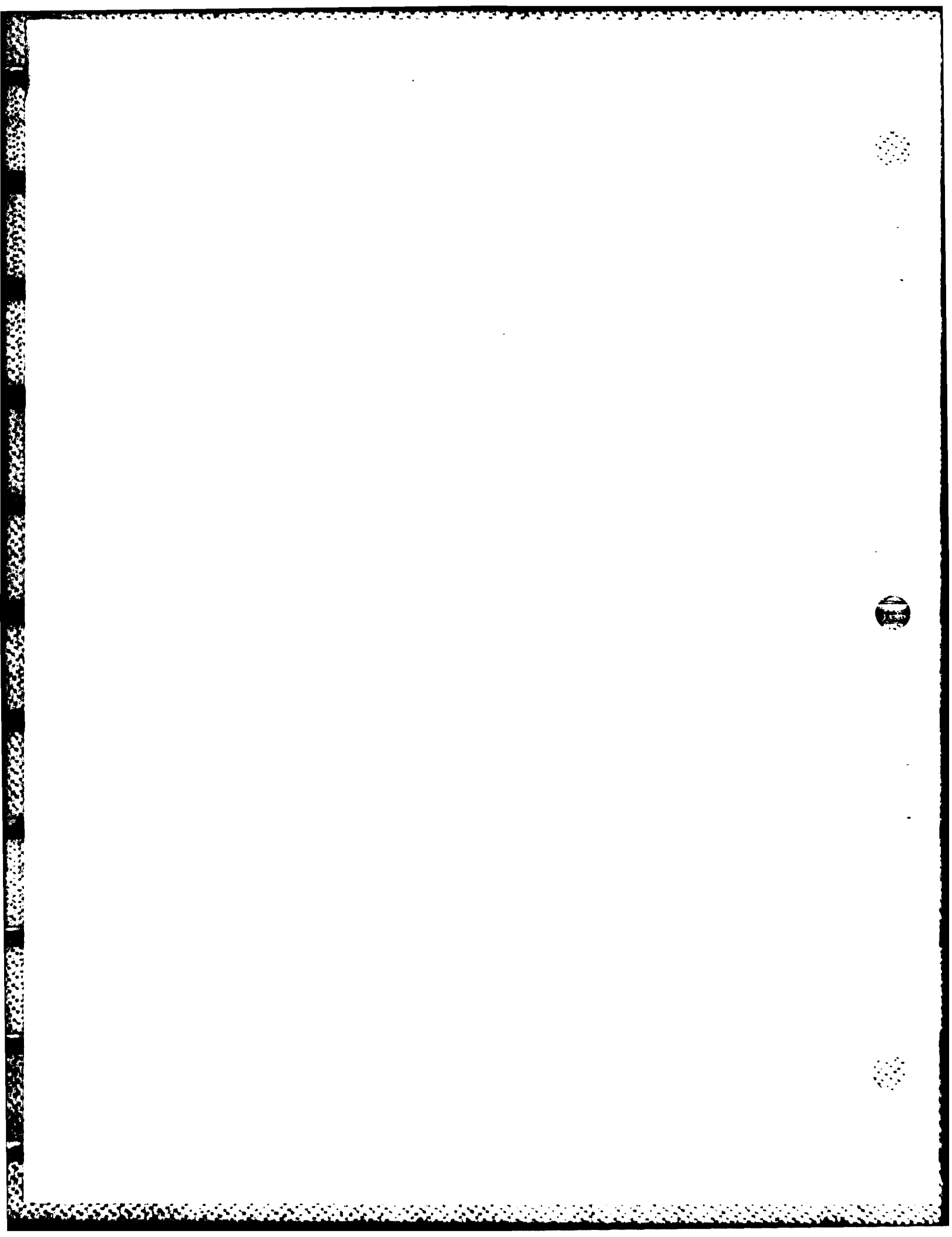
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## INTRODUCTION

The following pages present a final report of the excavation efforts carried out at 22Lo741. This mitigation project was undertaken in conjunction with the Tombigbee Historic Townsites Project, conducted by Michigan State University. The site was initially discovered and determined eligible for the National Register of Historic Places during the Historic Archaeological Site Survey of Disposal Areas C-6 and C-7 (Hambacher 1982). Because the site was located in the approximate center of the navigation channel right-of-way within the Columbus Lake and faced imminent destruction from construction activities, mitigation through archeological excavation was deemed appropriate.

In addition to mitigating adverse impact to the site, the work at 22Lo741 and the previous survey of historic cultural resources within Disposal Areas C-6 and C-7 (Hambacher 1982) helped to correct the sampling bias created by the initial surveys of the Tombigbee River Multi-Resource District. Besides meeting criteria outlined in the Tennessee-Tombigbee Waterway: Alabama and Mississippi: Tombigbee River Multi-Resource District Proposed Mitigation Plan, the excavation of 22Lo741 presented an excellent research opportunity and an opportunity to document a microcosm of human activity in the area. More specifically, the initial testing of 22Lo741 (MSU Museum 1980, Hambacher 1982) clearly demonstrated that the site contained information relevant to the general questions outlined in the General Research Design, Historic Settlement in the Tombigbee River Multi-Resource District, Tennessee-Tombigbee Waterway, Alabama and Mississippi. This relates specifically to the settlement system questions concerning the nature of light industrial activities within the Tombigbee River Multi-Resource District. These questions exist at two levels: the regional level and the internal organization of each site. At the regional level this involves the investigation of the association of light industrial sites with "physiographic or topographic features as required by their function and to plantations, farms or towns" (United States Department of Interior 1980, Doster and Weaver 1981:4). The second level involves the identification of isolated light industrial sites within the Tombigbee River Multi-Resource District and the explanation of their location and individual development. With regard to the economic and distribution systems the excavation of 22Lo741 allowed for the identification of some locally manufactured items and the nature of the usage of industrial technology within the area of the Colbert, Barton and Vinton townsites. Specifically, site excavations were geared toward recovering structural, functional and temporal information about the site which would allow the above questions to be addressed. These research questions are concomitant with those outlined in the Technical Proposals and supporting documents for the Tombigbee Historic Townsites Project (MSU Museum 1979a, 1979b). They concern the reconstruction and interpretation of the settlement, subsistence, economic, transportation, and social systems of the people living within the communities of Colbert, Barton, and Vinton. While the excavation of 22Lo741 alone cannot answer



all of these questions, the information contained in this report compliments the information obtained through archaeological, archival, and oral historical investigations at the Colbert, Barton, and Vinton townsites. So, this report serves primarily a descriptive purpose, documenting the information obtained through the mitigation of adverse impact at 22Lo741 and its subsequent analysis.

Preliminary testing of 22Lo741 was conducted during the final few days of the Historic Archaeological Site Survey (HASS) of Disposal Areas C-6 and C-7 and the adjacent Waterway Channel. As noted in the final report of the survey phase, the undisturbed cultural deposits at 22Lo741 were only discovered during the clearing of low-lying swampy areas south and west of the site in July 1981 (Hambacher 1982), and the credit for this discovery goes to curious construction workers and not the archaeologists. Because of its location in the middle of the navigation channel and the verified absence of intact and undisturbed cultural deposits at the other sites located within the navigation channel right-of-way (sites 22Lo735, 22Lo738, and 22Lo740), 22Lo741 was also assumed to have been totally destroyed. But because of a unique set of circumstances related to the physiography of the immediate site area and the initial clearing of the navigation channel right-of-way, this assumption proved to be incorrect.

The fact that the site sat on a small bench below the main crest of the first terrace of the Tombigbee River appears to have been the major factor contributing to the preservation. Reconstruction of the burial, sealing, and subsequent uncovering of the site is difficult. Nevertheless, the following sequence of events is hypothesized. The initial clearing of the navigation channel right-of-way in the fall of 1980 first disturbed the site. It was at this time that minor damage to the interior of the southern half of the structure at 22Lo741 occurred. As the slope of the terrace edge and the terrace itself was cleared, soil was pushed over onto the bench, sealing the site. But the initial clearing operation did not involve the sloping edges of the bench and the terrace edge south of 22Lo741, presumably because of wet, soggy soil conditions. Construction crews returned to complete the vegetation removal in the navigation channel during the summer of 1981, further impacting the site and subsequently uncovering it again. Although the site proper had been previously cleared of vegetation, clearing of the surrounding slopes and swampy areas resulted in heavy machinery traversing the site and dragging tree trunks across it for a period of two weeks. This resulted in the disturbance of the south wall of the structure, the destruction of the western edge of the bench and an unknown portion of the western side of the site, and further disturbance of the buried, intact soil horizons north of the structure. This activity generated the large soil and brick rubble piles discovered by archaeologists in July 1981. The extensive disturbance in the area, a relative paucity of artifacts on the surface, and other previously mentioned factors led to the incorrect conclusion that the site had been totally destroyed.

On a return visit to the site during the second week of August, it was noticed that heavy machinery had further disturbed 22Lo741. This activity resulted in the exposure of an approximate 2.5 m section of intact brick wall. After notifying Mr. W. Lee Minnerly of the Tombigbee Historic Townsites Project, it was decided to rapidly investigate the extent of the intact cultural deposits at 22Lo741. Because the initially budgeted time and monetary funds for the project were nearly depleted, it was incumbent upon the crew to move rapidly and efficiently as there were several other find spots within Disposal Areas C-6 and C-7 that also required investigation.

In order to investigate the extent of the intact cultural deposits, excavators undertook a series of judgmental excavations during the final three days of the HASS project that consisted of nine shovel tests, two 1 m units, and two trenches (Figure 1). Testing began by cleaning the section of wall exposed by heavy equipment. The trench, later designated as Unit 3, was extended north and south following the brick wall. To the south, the wall rapidly became highly fragmented and loose. Because of this and the fear of potentially losing any crushed intact remains, attention was concentrated on the north end of the bulldozer cut. The trench was expanded to approximately 1 m and the overburden shoveled off to expose the intact wall. At the edge of the original exposure, the brick shifted to a burned wall which was followed for several meters. At this point, it became shapeless and amorphous.

In an attempt to resolve whether or not the foundation actually continued or not, dousing was attempted. Although admittedly unscientific, it was considered as viable as a judgmental estimation. Based on the dousing and archaeological intuition, Test Unit 1 was placed 2 m north of Test Unit 3. The upper disturbed levels (Levels 1 and 2) were shoveled off and discarded. After carefully removing the A1 and A2 soil horizons (Levels 3 and 4), it became apparent that the foundation did not extend that far north, which placed an approximate limit on the northern end of the structure (within 2 m). By profiling the small, recent, erosional ravine approximately 6 m west of Unit 3, the western limits of the site were established. In order to ensure the presence of intact cultural deposits between Unit 3 and the ravine, Unit 4 was opened up along a roughly east-west trending wall adjoining the wall in Unit 3. This wall was followed for approximately 2 m before excavation was halted. Unit 2 was placed immediately east of the foundation in an attempt to identify any potential intact and undisturbed remains outside the structure. As with all other units, the disturbed soils were carefully removed without screening while the undisturbed soils were rapidly screened. In addition to Unit 2, a series of shovel tests bracketing the north and east sides of the structure were excavated in search of intact soil horizons and cultural deposits. These were largely uninformative because of the small area exposed by a shovel hole. Although the test excavations produced what eventually turned out to be several misconceptions about the size and integrity of 22Lo741, they did provide an absolute maximum on site size and depth as reported in the mitigation proposal for 22Lo741 submitted by the Tombigbee Historic Townsites Project.

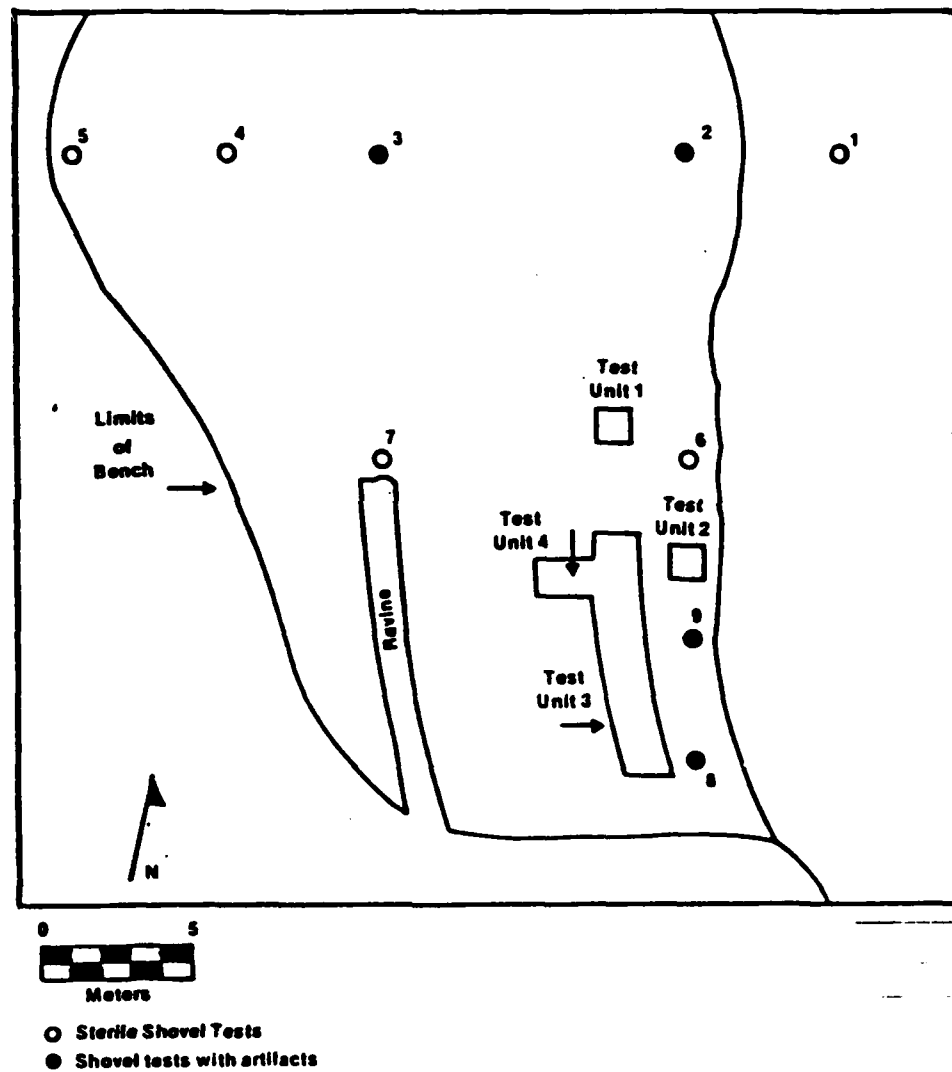


Figure 1. Location of survey phase test units and shovel tests.

Following the submission and approval of the proposal for mitigation efforts at 22Lo741, a field party composed of six crew members and one field supervisor returned to the site in early September 1981. The primary purpose of the excavations was to salvage as much as possible of the structure and any associated external cultural deposits. Mitigation of the site was required by virtue of its presence in the center of the navigation channel. A rather ambitious goal of excavating 60 two-meter units was proposed; this goal was not reached for two reasons. First was an unexpected degree of internal complexity to the structure, which is apparent in the sections dealing with the unit descriptions and the structural analysis. Secondly and equally, if not more, important, were the weather conditions. It is often the case with archaeological excavations that rain or cold weather become major nuisances. But the adverse weather conditions during the four week excavation of 22Lo741 were just the opposite. Throughout the first 17 days of excavation, the crew was plagued by burdensome hot and dry weather and ambient air temperatures that routinely reached the mid to high 90s Fahrenheit. These temperatures were intensified by the lack of shade and the light colored soil in the cleared navigation channel that acted as an efficient solar reflector. The net result was an ovenlike atmosphere that pushed the crew to its limits of physical endurance and that literally baked the soil harder than the soft-fired brick at the site. Problems were compounded during the final mapping and dismantling of the structure. Complete excavation of a portion of the structure was only accomplished by a field crew that demonstrated a remarkable degree of tenacity, perseverance, and competitiveness with nature.

## ENVIRONMENTAL SETTING AND LOCATION

Site 22Lo741 is a multicomponent, multifunctional light industrial site on the east side of the Tombigbee River opposite the extinct town of Barton. The site lies within the Tombigbee Terraces physiographic province of northeastern Mississippi. This province consists of the extensive Pleistocene and Holocene alluvial deposits present in the broad, flat floodplains of the Tombigbee River and its major tributary rivers and streams. In the area of 22Lo741 the Tombigbee Terraces are juxtaposed between the Fall Line Hills province to the east and the Black Prairie province west of the Tombigbee River. The physiography of this region is typical of the province, consisting of a broad, flat floodplain composed of Pleistocene and Holocene alluvial deposits (Doster and Weaver 1981:22-23). The soils in this province tend to be gently sloping and are sandy to loamy in texture. Doster and Weaver (1981:24-25) report that

the vegetation of the lower terraces and particularly of the floodplains is typical of river floodplains throughout the Gulf Southeast (Clark 1972). This floodplain forest remains distinct as the Tombigbee passes through the Fall Line Hills and the Black Prairie. The floodplain forest is typically dominated by tupelo gums (Nyssa aquatica), bald cypress (Taxodium distichum), and several species of oak, particularly shumard oak (Quercus shumardii), overcup oak (Quercus lyrata), water oak (Quercus nigra), willow oak (Quercus phellos), laurel oak (Quercus laurifolia), and swamp chestnut oak (Quercus prinus). Other species that are common in the forest include swamp piment (Forestiera acuminata), red bay, water elm (Planera aquatica), American elm (Ulmus americana), cabbage palm, sugarberry (Celtis laevigata), and rattan vine.

At the time of the Historic Archaeological Site Survey of Disposal Areas C-6 and C-7 (Hambacher 1982) and the subsequent excavation of 22Lo741 most of the original vegetation had been removed by the Weyerhaeuser Co. pine plantation or in the course of preparation of the area for the construction of the navigation channel right-of-way.

Specifically, 22Lo741 sits on a small bench extending northwest from the Holocene terrace that runs north-northwest through the southwestern corner of Disposal Area C-6, Columbus Lake, Tombigbee River Multi-Resource District, Lowndes County, Mississippi. The bench is located approximately halfway up the terrace edge, approximately 45 m due south of the Barton Ferry Road and 107 m due west of the junction of the Upper and Lower Barton Ferry roads. The site lies in the southwest quarter of the northwest quarter of Section 35, Township 16 S, Range 19 W at UTM grid coordinates Zone 16 North: Northing 439,714 m; Easting 183,465 m (Figure 2). Elevation of the site lies between 51.8 m (170 ft) and 53.0 m (174 ft). By the time the site was discovered, the navigation channel right-of-way had already been cleared of vegetation, considerably deforming the original ground surface. The 1976 topographic survey of

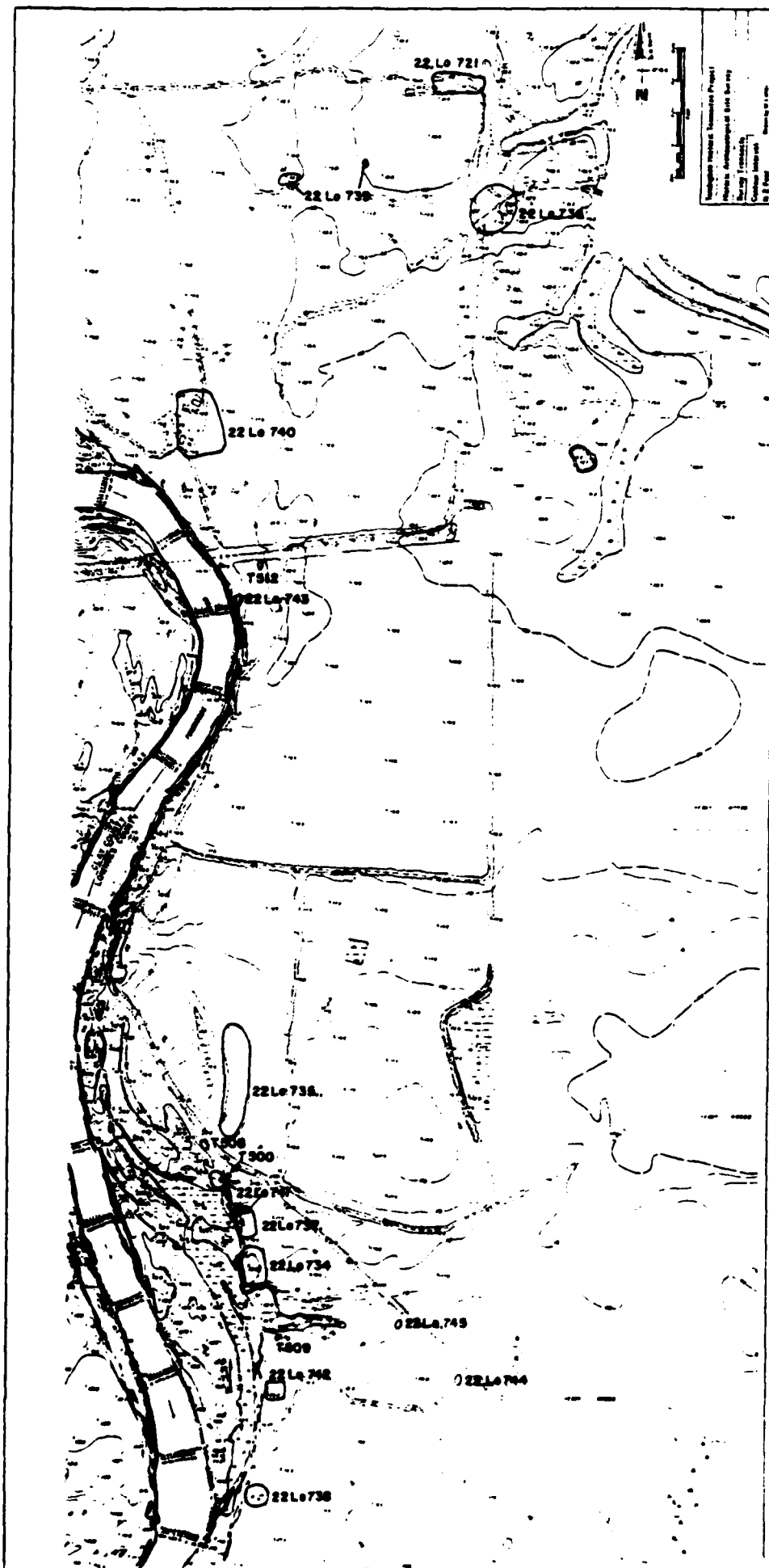


Figure 2. Site location map.

the Columbus Lake performed by Michael Baker, Jr, Incorporated, Jackson, Mississippi, indicates that the bench ran parallel to the terrace edge and was approximately 53 m (175 ft) by 23 m (75 ft) in size. Its widest portion was at the southern end of the bench and it tapered northward with steep slopes on the southern and western sides. These slopes terminated in several small swamps at the base of the terrace. By August 1980 the bench had been reduced to a rectangular area 20 m (66 ft) north/south by 10 m (33 ft) east/west.

A total of 96 square meters centered on the structural remains at 22Lo741 were hand dug over the course of the five week mitigation.

## ARCHIVAL DOCUMENTATION

Archival research for 22Lo741 was restricted to the investigation of resources available at the Lowndes County Courthouse in Mississippi. It was felt by the Principal Investigators that in terms of identifying site function, age, and land ownership the transactions recorded in the deeds for Lowndes County would be the most profitable source of archival documentation. This research basically summarized the deeds involving the transaction of lands within Section 35, Township 16S, Range 19W, specifically the southwest quarter of the northwest quarter of Section 35. Particular emphasis was placed on tracing references to the "old gin house," which was mentioned in an 1858 deed of trust between Bardine Richardson and Josiah Y. Hicks (MSU Museum 1980:2). The ensuing discussion derives from the field work performed by Ms. Donna Kreutzer of the Tombigbee Historic Townsites Project Archival Program.

Archivists traced deed transactions involving the northwest quarter of Section 35, Township 16S, Range 19W for the period beginning in October 1834 and ending in July 1913. The first land transaction recorded for the section is the transfer of the northeast quarter from Micajah Bennett to Silas McBee (Lowndes County Deed Book 2:381); the northwest quarter was not involved in this transaction. The first recorded transactions involving the northwest quarter occurred in October 1834 (Lowndes County Deed Book 4:126, 128). On a deed dated 24 October 1834, the entire area comprising Section 35 was transferred from Edwin Watkins to Silas McBee. Another deed dated five days later (29 October 1834) transferred the western half of the section back to Edwin Watkins. These deeds do not mention any structures on the lands involved, nor do they concern ferry rights at Colbert.

Although land deeds and deeds of trust continued to mention the lands in Section 35, these transactions involved only the eastern half of the section. It is not until 1851 that transactions involving the northwest quarter of the section appear once again in the deed books. This deed, dated 21 April 1851, transferred the entire section from the ownership of Margaret Allen and her husband, John L. Allen, to James R. Hilliard for the sum of \$2,500 (Lowndes County Deed Book 26:133), and it was accompanied by a deed of trust between J. R. Hilliard and Margaret Allen deeding the land back to the Allen family if the debt of \$2,500 was not paid. A deed between James R. Hilliard and James H. Griswold dated 21 April 1851 (Lowndes County Deed Book 26:229) also involved the sale of the entire section, but for only \$1,250 in this case. Although neither the ferry rights nor the old gin house are mentioned, these deeds illustrate the formation of the Griswold-Hilliard partnership that controlled the Barton Ferry after 1851.

The next transaction for Section 35 also involved James Griswold and James R. Hilliard. In this deed, dated 13 February 1852, Griswold sold to Hilliard for the sum of \$25:



undivided one half of the following lands and appurtenances thereunto appertaining to-wit; the west half of the north east quarter, north west quarter, the south west quarter, the west half of the south east quarter; Section No. 35 ... also the southwest quarter of fractional Section Two, Township 17, Range 19 west (Lowndes County Deed Book 26:446).

Griswold retained the landing rights for a ferry on any of the above land and for a public road to and from the ferry to any public road in Lowndes County. This is the first time that ferry rights are mentioned. A second deed, also dated 13 February 1852, transferred the entire Section 35 from Griswold to Hilliard for the sum of \$1,852 and also referred to ferry rights. Reference to structures, such as a cotton gin, on the eastern side of the Tombigbee River had not yet appeared in the deeds by 1852.

In deed records, the "old gin house" and buildings in general are not mentioned until 30 April 1853 in another land transaction between Hilliard (grantor) and Griswold (grantee) involving the entire Section 35 (Lowndes County Deed Book 27:520). During 1854, Hilliard used his land on the eastern side of the Tombigbee River as a guarantee of payment of debt in two deeds of trust between Hilliard and Thomas W. Brown. The first is dated 21 March 1854 and only involved the southwest quarter of Section 35 (Lowndes County Deed Book 28:32), but the second, dated 10 April 1854 (Lowndes County Deed Book 28:68), involved the entire section and a sum of \$400. These deeds do not mention standing structures.

In regard to the identification of a cotton gin at 22Lo741, a deed and a deed of trust dated 16 January 1857 (Lowndes County Deed Book 30:63, 186) involved the sale of lands on both sides of the Tombigbee River by James H. Griswold and his wife, Anna M., to Martha A. Wamble, for the sum of \$4000. As in the 1853 deed, the "old gin house" on the eastern side of the river is mentioned. Other buildings in the area of 22Lo741 are mentioned as landmarks:

Sold to the party of the second part [Martha A. Wamble] the following tract or parcels of land to wit; sixty feet from the verge of the bank of the high lands on the Tombigbee River, all of the land conveyed by deed by John L. Allen and Margaret Allen to Jas. R. Hilliard bordering on said River from the south line North to the smoke House (not to include any of the buildings on the place, or to put any houses on the Eastern Bank), thence north on the ridge to the northern line leaving land sufficient for a Road on the second Bank by the old Gin House to the northern line estimated to contain twenty acres more or less. The land conveyed above is contained in the West half of the North east quarter and the north west quarter and the South west quarter and the West half of the South east quarter of section No. Thirty five (35), Township No. Sixteen (16), Range Nineteen (19) west, also the

South west quarter of Fractional section Two (2), Township Seventeen (17), Range Nineteen (19) West - To have and hold the same to himself his heirs or assigns forever. Together with all the rights or appertuances thereunto belonging or in anyway appertaining, which is to secure to the party of the second part his heirs or assigns the right of a ferry, of a ferry landing, with all the rights and privileges appertaining thereon (Lowndes County Deed Book 30:186-187).

A deed of trust between the two parties accompanied this deed. In addition to the lands on the Eastern side of the Tombigbee River, several blocks in the town of Colbert were also transferred.

Hilliard retained at least partial control of the land even though he sold the whole section to Josiah Y. Hicks for the sum of \$1800 in a deed dated 22 September 1857 (Lowndes County Deed Book 30:417). This transaction does not mention the "old gin house" or the status of the ownership of the ferry rights, but other sources indicate that Griswold alone held the ferry rights for the Jackson Springs Ferry (Barton Ferry) in 1853, 1856, and 1857, and that Susan Littleton owned the operating license by 1860 (Elliott 1978:78).

The final mention of the "old gin house" in the deeds occurs in a deed of trust concerning a debt of money owed by Bardine Richardson to Josiah Y. Hicks with Thomas J. Sharp acting as trustee (Lowndes County Deed Book 30:668). This deed of trust involved lands on both the eastern and western sides of the Tombigbee River, and the reference to the "old gin house" is contained in the description of lands to be transferred. This description is verbatim to that quoted above from the 1857 deed between Griswold and Wamble except that this later deed does mention the Barton Ferry by name. Since the transactions after this period do not contain specific reference to the "old gin house," they are not considered here other than to be summarized in Table 1.

Through several lines of inference, the "old gin house" mentioned in these deeds has been identified as 22Lo741. First and most obvious is the location of Section 35 and Fractional Section 2 lands and the transference of the ferry rights for the Barton Ferry (Jackson Springs Ferry). By the 1850s, this was the main ferry in the immediate vicinity (Elliott 1978:60-61). This securely places some of the land in question within the bounds of the surveyed portions of Disposal Areas C-6 and C-7 (see Hambacher 1982). Although the survey area (Hambacher 1982) did not encompass the ferry landings themselves, it did span the stretch from the Colbert Ferry on the south to beyond the Barton Ferry on the north. Second and most important are the nature and types of nineteenth century sites in the vicinity of the Barton Ferry Road. Of the six sites recorded in this area (Hambacher 1982), all but two--22Lo741 and 22Lo742--were clearly domiciliary sites, and 22Lo742 contained no evidence of industrial activity. Furthermore, the deeds refer to the necessity of leaving space on the second bank of the

Table 1. Deed Summary for Section 35: 1858 to 1913.

Grantor	Grantee	Instrument	Date	Book	Page	Quarter Section Involved			
						NE	NW	SW	SE
Josiah Y. Hicks	Mary E. Hicks	Trust Deed	8/17/1858	31	41	X	X	X	X
R. C. Littleton	Peter Melson	Q.C. Deed	2/4/1860	31	7791		X	X	X
Bardine Richardson	Josiah Y. Hicks	Deed	10/28/1859	31	778	X	X	X	X
Lawson H. Williford, trustee	Thomas W. Brown	Trust Deed	12/24/1860	32	504	X	X	X	X
James R. Hilliard, et al.	Josiah Y. Hicks	Deed	3/7/1861	32	575	X	X	X	X
J. Y. Hicks and wife	James R. Hilliard	Deed	8/2/1862	33	252	X	X	X	X
Benjamin L. Morgan, et al.	George W. Sherman	Deed	5/10/1859	33	691	X			
George W. Sherman	Virginia R. Sherman	Trust Deed	12/7/1861	34	317	X			
James B. Bell, sheriff	Elizabeth B. Randolph	Deed	2/5/1867	40	101	X			
George W. Clayton, trustee	Elizabeth Randolph	Deed	12/31/1866	40	59	X			
Peter Nelson	B. Richardson	Deed	11/2/1871	41	334				X
Bardine Richardson	Billups and Banks	Deed	2/3/1879	45	492				X
T. C. Lyons, chancellor	Mary E. Hilliard	Estate Decree	1/21/1874	48	262	X	X	X	X
Bardine Richardson	Billups and Banks	Trust Deed	3/24/1875	52	277				X
William A. Hilliard	George Curtis	Trust Deed	4/4/1879	54	395	X	X	X	X
State of Mississippi	Elonia Hutchinson	Deed	6/22/1878	55	243	X	X		
Mary E. Hilliard	Elonia A. Hutchinson	Q.C. Deed	8/7/1878	55	255	X	X	X	X
James Hilliard, et al.	Dr. J. D. Hutchinson	Deed	4/3/1879	55	430	X	X	X	X
J. D. Hutchinson	Mrs. Elonia Hutchinson	Deed	1/1/1880	57	111	X	X	X	X
W. D. Bell, sheriff	Elonia Hutchinson	Tax Deed	10/20/1879	58	147	X	X	X	X
C. L. Lincoln, trustee	George Curtis	Trust Deed	7/28/1881	58	442	X			X
George W. Sherman	R. W. Musten	Trust Deed	3/26/1885	59	405	X			
George W. Sherman, et al.	E. P. Richards	Trust Deed	11/1/1886	59	615	X			
W. R. Richardson	J. D. Hutchinson	Deed	10/22/1886	62	355		X		
Sarah Nelson	Elonia Hutchinson	Trust Deed	12/17/1885	63	253	X			X
E. P. Richards, Comm.	J. D. Hutchinson	Deed	11/25/1884	63	261	X	X		X
E. P. Richards, Comm.	W. R. Richardson	Deed	11/25/1884	63	263		X		
Billups and Banks	J. D. Hutchinson	Deed	10/29/1890	67	324				X
L. W. Sherman	F. P. Jenkins	Trust Deed	8/19/1892	71	45	X			
Elonia Hutchinson	J. D. Hutchinson	Deed	2/17/1893	73	18	X	X	X	X
F. A. Sharp	J. M. Sanderford	Trust Deed	12/11/1895	74	295		X		
G. Sherman	F. P. Jenkins	Trust Deed	9/26/1898	80	159	X			
G. Sherman	F. P. Jenkins	Trust Deed	10/31/1898	80	161	X			
C. L. Lincoln, Comm.	First National Bank, Aberdeen, Miss.	Deed	12/20/1899	80	403	X			

Table 1. Continued.

Grantor	Grantee	Instrument	Date	Book	Page	Quarter Section Involved			
						NE	NW	SW	SE
J. D. Hutchinson	Sam Seliz	Trust Deed	4/4/1902	82	384	X	X	X	X
E. Richardson	Billups and Banks	Trust Deed	5/16/1877	54	244				X
Mrs. S. E. Yates	T. A. Sharp	Deed	8/7/1894	72	492		X		
J. D. Hutchinson	E. C. Chapman	Trust Deed	2/1/1893	74	12	X	X	X	X
E. N. Hutchinson	Green and McCullough	Ree's Deed	2/10/1913	92	529	X	X	X	X
Columbus Lumber Co.	Security Trust Co.	Mortgage	7/23/1913	97	500	X	X	X	X

Taken from Lowndes County Deed Books 31-34, 40, 41, 45, 48, 52, 54, 55, 57-59, 62, 63, 67, 71-74, 80, 82, 92, 97.

Tombigbee River for a road near the "old gin house" (Lowndes County Deed Books 4, 26-28, and 30). This seems to refer to the road leading to the Barton Ferry. As stated above, 22Lo741 sits only a short distance south of the modern Barton Ferry Road, and there appear to have been few changes in the Barton Ferry Road system on the eastern side of the Tombigbee River since ca. 1847 (MSU Museum n.d.b). In conclusion, all available information contained within the deeds involving Section 35 indicates that 22Lo741 is the "old gin house."

## SOILS AND STRATIGRAPHY

The small bench on which 22Lo741 rests is part of the large Holocene terrace system that cuts through the southwest corner of Disposal Area C-6 (Hambacher 1982). This terrace is the first terrace east of the present banks of the Tombigbee River. Soils on and surrounding 22Lo741 have developed from alluvial materials deposited by the river. Soil stratigraphy represents a nearly typical profile of Latonia series soils, a fine to medium sandy loam in texture, although the lower horizons are somewhat atypical, tending to consist of massive fine-grained sands. The extremely dry condition of the soil greatly hindered precise determination of clay content. The soil was very friable and well-drained.

During the excavation of 22Lo741, five major stratigraphic horizons were defined. These represent both natural soil horizons and those disturbed and modified by human activity at the site over a period of some two millennia. The horizons were ascribed numbers in a descending order as they were exposed. The upper and most recently disturbed and redeposited stratum at the site was originally designated as Level 1. This stratum resulted from the navigation channel clearing operations carried out in the vicinity of the site during the summer of 1980. During the interval between the discovery and preliminary testing of the site and the beginning of full scale excavations, the soil baked and dried out to such an extent that a distinction could no longer be made between the disturbance generated during July/August 1980 and that of the previous fall. Therefore, the Level 1 designation was shifted to refer only to the loose, dried, and baked dust and soil clumps lying immediately on the surface. Level 1 was present across the entire site, characteristically in discontinuous patches, and was between 2 cm and 5 cm thick where it occurred. This level was usually swept off a unit and discarded without screening, but it did occasionally produce a few artifacts.

Level 2 consisted of the bulk of the redeposited fill that overlaid much of the nineteenth century remains at the site. This level was composed of intermixed and interdigitated yellowish brown (10YR5/4 and 10YR5/6), dark yellowish brown (10YR4/4 and 10YR4/6), dark brown (10YR3/3), and brown (10YR4/3) silty sandy loam, sand, and clay. Brick fragments, pieces of charcoal, and undecayed tree branches and roots were dispersed throughout the stratum. Thickness varied greatly from a minimum of 1 cm to a maximum of 65 cm. Over most of the site, it ranged between 20 cm and 40 cm thick. The upper surface of the level undulated with several major depressions that were located between Units 6 and 8, off the northwest corner of the site, and along the southern half of Feature 1. The stratum was thickest in the northern and eastern portions of the site, nearest the ascending edge of the main terrace, and thinnest in the southwestern and western 4 m of the site. The lower boundary of the level was consistently sharp and clear and tended to be

horizontal. Characteristics of Level 2 in the individual units are cited under the unit descriptions. Generally, Level 2 was not screened, and it had a low density of cultural material.

Level 3 lay immediately under Level 2 across the entire site except where both have been truncated (the western and southern tier of excavation units). The horizon generally consisted of a very dark gray (10YR3/1) to very dark grayish brown (10YR3/2) sandy clay to sandy clay loam, and soil texture varied slightly, generally becoming sandier toward the southern end of the site. Minor to moderate amounts of small brick fragments and charcoal flecking were dispersed throughout the level. Besides having a very distinctive color, Level 3 also had a distinctive odor: akin to an open sewer. Level 3 varied between 4 cm and 22 cm in thickness with an average thickness of 6-10 cm; thicknesses greater than 10 cm tended to occur where trees had been removed or in other areas of recent disturbance. The horizon lay relatively horizontal across the site except along the eastern edge where it ascended the edge of the main terrace. The lower boundary of the horizon was generally slightly diffuse and horizontal to slightly undulating.

Level 3, which was the product of natural soil genesis, represents the first and uppermost horizon containing undisturbed cultural materials. The stratum corresponds to the original A1 soil horizon, which developed over the site after the structure had been abandoned and was reduced to ruins. A moderate amount of nineteenth century cultural material was recovered from the stratum.

Level 4 bore most of the nineteenth century artifactual and structural remains at the site and is therefore the most complex stratum. Because the criteria used to define the major stratigraphic horizons at the site refer to both archaeological and pedological variables, Level 4 was subdivided into Levels 4a and 4b.

Level 4a was restricted to the interior of the structure. Typically, this stratum was a brown (10YR3/3) to dark brown (10YR4/3) very compact silty sand. A moderate amount of brick fragments and charcoal was scattered throughout the level, which lay horizontally and ranged in thickness from 5-30 cm; the modal thickness ranged between 10 cm and 15 cm. The lower boundary was clear and nearly horizontal. The level had been truncated in the western and southern tier of excavation units.

Where present, Level 4a contained the intact nineteenth century structural remains and activity areas. The horizon resulted from deposition during the utilization of the structure, its destruction, and the subsequent pedogenesis. Level 4a corresponds to a post-occupational A2 soil horizon. In general, the horizon had a dense concentration of artifactual remains. Specific characteristics and configurations of Level 4a are discussed below in each individual unit description.

Level 4b was present across the entire site. Inside of the structure, it lay stratigraphically below Level 4a. In this area, Levels 4a and 4b were occasionally separated by a thin (less than 5 cm), diffuse zone of brown to dark yellowish brown (10YR3/3 to 10YR4/4) fine silty sand that was distinguished by a gray cast. It was not assigned a separate level number because of its amorphous, discontinuous, and diffuse nature. Instead, it was treated as a distinct area within Level 4. Post-excavation analysis indicates that this thin, gray cast soil zone is the basal remnant of the transition zone between the original pre-nineteenth century A1 and A2 soil horizons.

The texture of Level 4b was uniform across the site, consisting of a fine silty sand. The color tended to be slightly darker outside of the structure than inside. Outside of the structure it was dark brown (10YR3/3), and inside it was brown (10YR4/4) to dark yellowish brown (10YR5/4). This level contained only a few brick fragments except outside of the structure, where it also contained charcoal flecking and a low concentration of artifacts. Representing the original A2 soil horizon, Level 4b lay roughly horizontal and ranged in thickness from a minimum of 6 cm to a maximum of 21 cm; modal thickness ranged between 15 cm and 20 cm. The lower boundary of the horizon was very diffuse and undulating. Specific characteristics of the level are discussed below for each individual unit.

Level 5 was also present across the entire site, lying stratigraphically below Level 4. This horizon was generally devoid of historic and prehistoric period artifacts and was considered the culturally sterile subsoil. Typically, it was a dark yellowish brown (10YR5/4 to 10YR5/6) fine silty sand. Because excavation only proceeded partially through this stratum, accurate thickness measurements are not available. Only in the excavation of Feature 9 was the apparent base of Level 5 penetrated. Using a soil tube probe, excavators reached a light yellowish brown (10YR6/4) sand approximately 10 cm below the base of the excavation, or approximately 1.8 m below the upper surface of Level 5. Level 5 corresponds to a developed B2 soil horizon. Specific characteristics of the horizon are discussed below for each individual unit.



## LABORATORY METHODOLOGY

The preliminary processing of all artifactual material recovered during the excavation of 22Lo741 took place at the Tombigbee Historic Townsites Project (THTP) field laboratory in West Point, Mississippi. Procedures followed the guidelines described in THTP documents (MSU Museum 1979a, 1979b, 1982; Minnerly n.d.a.), and artifacts were coded according to the revised version of the THTP code book. Final analysis of the artifactual and other remains took place at the THTP laboratory facilities at Michigan State University, East Lansing, Michigan.

The quantification of the ceramic and glass remains by minimum vessel counts is considered to be much more desirable than raw sherd frequencies for a variety of reasons, including more accurate identification of the relative frequencies of various functional forms, and as a means to overcome the bias generated by differential breakage (Hambacher 1982). Identification of discrete vessels requires the reconstruction of the remains. Because the ceramic and glass assemblages were relatively small, optimum levels of reconstruction became particularly important in the analysis. Although very time consuming and labor intensive, the results were highly successful. Not only did this allow for the nearly complete reconstruction of a Staffordshire Blue transfer printed plate, but the maker's mark recovered from the surface some 30 m west of the site was definitively associated with the plate, and hence with the site. Although no glass vessels were completely reconstructable, major portions of bases, shoulders, and lip/necks were.

A wide variety of ferrous artifacts composed the bulk of the artifact assemblage. Although the THTP code book adequately identified much of the material, such as the tools, further work was necessary, mostly the accurate description of the ferrous and nonferrous metallic remains. Particular attention was given to the description and possible identification of unidentified iron/steel, copper, and brass and those artifacts classified as miscellaneous machine parts. It was hoped that the positive identification of some of the machine parts would help verify the presence of a cotton gin at 22Lo741. Although much useful illustrative material concerning cotton gins was graciously provided by Mr. Robert Sutton, Architectural Historian, National Park Service, Southwest Region, it failed to resolve the question of the identity of the miscellaneous machine parts. The reasons for this are twofold. First, and foremost, the majority of the miscellaneous machine parts are highly fragmented. Secondly, some of the line drawings of cotton gins in cross-section did not provide enough detail to identify the pieces recovered from 22Lo741.

## EXCAVATION PROCEDURES

The excavation of 22Lo741 during the mitigation phase proceeded in the following manner. The first order of business was the removal of the recent back dirt pile located over the interior of the structure. Once this was accomplished, a site datum was established off of the northeastern side of the site on the crest of the terrace. The site datum was then tied into HASS Transect 301 (Hambacher 1982) on the eastern side of the navigation channel in order to permanently affix 22Lo741 in areal space. Two baselines were then established, one across the north end of the site and one across the eastern end. The grid was aligned along magnetic north rather than true North; true North lies 5° east of magnetic north. A 2 m orthogonal grid was then established by surveying a series of parallel north-south trending lines, creating a grid 22 m (N/S) by 14 m (E/W) in size. Additional units were generated by triangulation. Relative elevation data were recorded for all grid stakes.

Excavation of the units was carried out according to standard archaeological procedures, and those specified in the Technical Proposal and supporting documents of the Tombigbee Historic Townsites Project (MSU Museum 1979a, 1979b, 1980), so the southwest corner of the excavation unit was generally employed as the unit datum. But in order to make the recording of elevation data more efficient, this procedure was violated in a number of instances, particularly where the ground level sloped to a large degree, such as along the western and southern edges of the structure and with the excavation units that straddled the original test units. In these cases, the highest corner of the unit was utilized as the unit datum. Actual removal of the soil from each unit was accomplished via natural stratigraphic levels based primarily on color and textural information gathered during the testing operation. Excavators left a 15 cm triangular balk around each grid stake as excavation proceeded. Initially, they also left a 15 cm balk along the unit sides for profiling purposes but because of drying and cracking of the profile, balks were later expanded to 20 cm wide. All floor plans and two representative profiles were mapped and photographed in both black and white and color. The excavation of each stratigraphic level at the site proceeded as follows.

Level 1, consisting of the loose, dried, redeposited soil, was simply hoed or swept off and discarded without screening. As it was removed, it was visually inspected for possible artifactual remains. For control purposes and to verify its basically sterile nature, it was screened for the initial four units excavated during the mitigation phase (Units 5-8). It was not photographed.

Level 2, the compacted redeposited soil, was likewise generally not screened and just hoed or shoveled off. Again, for control purposes it was completely screened for Units 5-8. It was also occasionally screened on the interior of the structure in an attempt to increase the ceramic and glass assemblages. When this occurred, it is noted for each unit under the unit description section. The base of Level 2 was photographed and mapped.

Level 3, the twentieth century A1 soil horizon, was screened in all units. The base of the level was mapped and photographed in both color and black and white, utilizing 35 mm film in all instances.

Level 4, the "midden" and nineteenth century A2 soil horizon, was also completely screened in all instances. It was in this level that all features and areas became evident. As a feature or an area was exposed and delineated, removal of the level was terminated for mapping and photographic purposes. The point at which Level 4 was subdivided was a judgmental decision on the part of the field supervisor based on the clarity of definition of the discoloration and/or any perceived significant change in its configuration. The break between the Level 4 midden and the nineteenth century A2 soil horizon was always mapped and photographed wherever such a break occurred.

Level 5 was generally only excavated to a depth of 10 cm in order to ensure that there were no features or areas extending into it. On occasion, it was excavated to a greater depth and these are recorded with the individual unit descriptions. Level 5 was always screened, and it did occasionally produce prehistoric artifacts. Because of the total lack of prehistoric features and a low density of artifacts, the complete excavation of the prehistoric component was not considered crucial and was shifted to a lower priority than the excavation of the historic component. The top and base of Level 5 (the point of termination of excavation) were generally not mapped or photographed although a detailed written description was recorded for each unit. Once excavation was terminated within a unit, the walls of the unit were mapped and photographed.

Several definitions and procedural practices associated with them require some brief statements. A rather strict definition of the term "feature" was employed in the excavation of 22Lo741. Features were defined as culturally generated disturbances that penetrated the "sterile subsoil" and for which a functional interpretation in the field could be made. This essentially confined features to postmolds, foundation walls and their associated builder's trenches and pits. Once a feature number was assigned, it was not reused even if the feature turned out not actually to be a feature, as with Features 2 and 3 (see feature descriptions). Except in four instances, all features were mapped and photographed in plan and then cross sectioned. Features 1 and 7 involved brick features that were dismantled course by course in order to obtain construction data, Feature 4 was taken down horizontally to avoid damage to the underlying Feature 7 (brick platform), and Feature 15 consisted of an undecayed post.

Areas were defined as zones of discoloration within a level that generally did not penetrate the base of the level. These zones often consisted of amorphous stains and were not attributed a functional identification. The primary purpose of the area designation was to subdivide a level into several zones that did not conform to the definition of a feature. Areas were generally not cross sectioned but carefully removed horizontally with strict attention paid to changes in areal configuration and the manner in which the level bottomed out. Levels were always photographed, mapped, and screened through quarter-inch hardware cloth, the standard procedure for all screened soil.

Because the testing program indicated that there were potentially undisturbed cultural deposits north of the structure, excavation began in this area. Beginning here also allowed excavators to familiarize themselves with the natural sequence of site stratigraphy and adjust to the shift from excavating in arbitrary levels, as employed at the Barton and Vinton townsites, to excavating according to natural stratigraphy. It should be noted that five of the six crew members were selected from the THTP field crews after Phase II excavations had been completed. The initial four units excavated indicated that the sloping edge of the terrace was disturbed to a point below the transition from the A to the B soil horizon and that the potential for intact deposits bearing cultural remains outside of the structure was very low. This process consumed the first week of excavation. Once these first four units were completed, the focus of the excavation shifted to the structure itself.

Figure 3 illustrates the location and number of each unit. The individual unit numbers indicate the sequence of excavation. Initial excavation within the structure was concentrated in two areas. Around Unit 4, the excavation was designed to complete an east-west trench across the site following the northernmost identified foundation wall and to find its western limit. The second area was immediately east of Unit 3 and was designed to firmly delineate the easternmost boundary of the site.

Attention then turned to cutting a trench through the interior of the structure (Units 17-19). Excavation proceeded smoothly from south to north until Level 4 was penetrated. In order to clarify minor problems with Level 4 in this area, the focus of excavation shifted to the tier of units located immediately west. Again, excavation proceeded from south to north, and these units delineated the truncated western boundary of the site.

The final sequence of excavation units involved complete exposure of the southern wall of the structure, which also represents the effective southern boundary of the site, and the filling in of gaps in the interior of the structure. Unit 25 was opened up solely to obtain a more complete profile of Feature 9. As each unit was excavated, any structural feature encountered was left in situ to allow field inspection of the floorplan. The 28 excavated units provide a nearly



complete picture of the structure. Unfortunately, the actual northern edge of the structure was not excavated. Throughout the four-week excavation, surveyors believed that the foundation wall originally exposed in Unit 4 constituted the northern limit of the structure. This belief was dramatically disproven during the final hours of the final day of excavation when the builder's trench associated with Feature 1 was removed and an undecayed plank was found lying at its bottom extending northward out of the excavation (see Figure 4). The presence of approximately 1 m of overburden between the northern tier of units and Unit 8 and the lack of additional time to open up a new series of units prohibited the excavation of this area. The field supervisor bears full responsibility for this judgmental error. The section concerning the structural analysis of 22Lo741 discusses the implications of this discovery and hypothetically reconstructs the area.

Through the employment of these excavation procedures a total of 96 sq m were hand dug in natural levels. The depth of excavation ranged between a minimum of 0.25 m to a maximum of 3.44 m (in the case of Feature 9), with an average depth of approximately 0.70 m. A total of approximately 58.3 cu m was excavated, including 16 separate features.

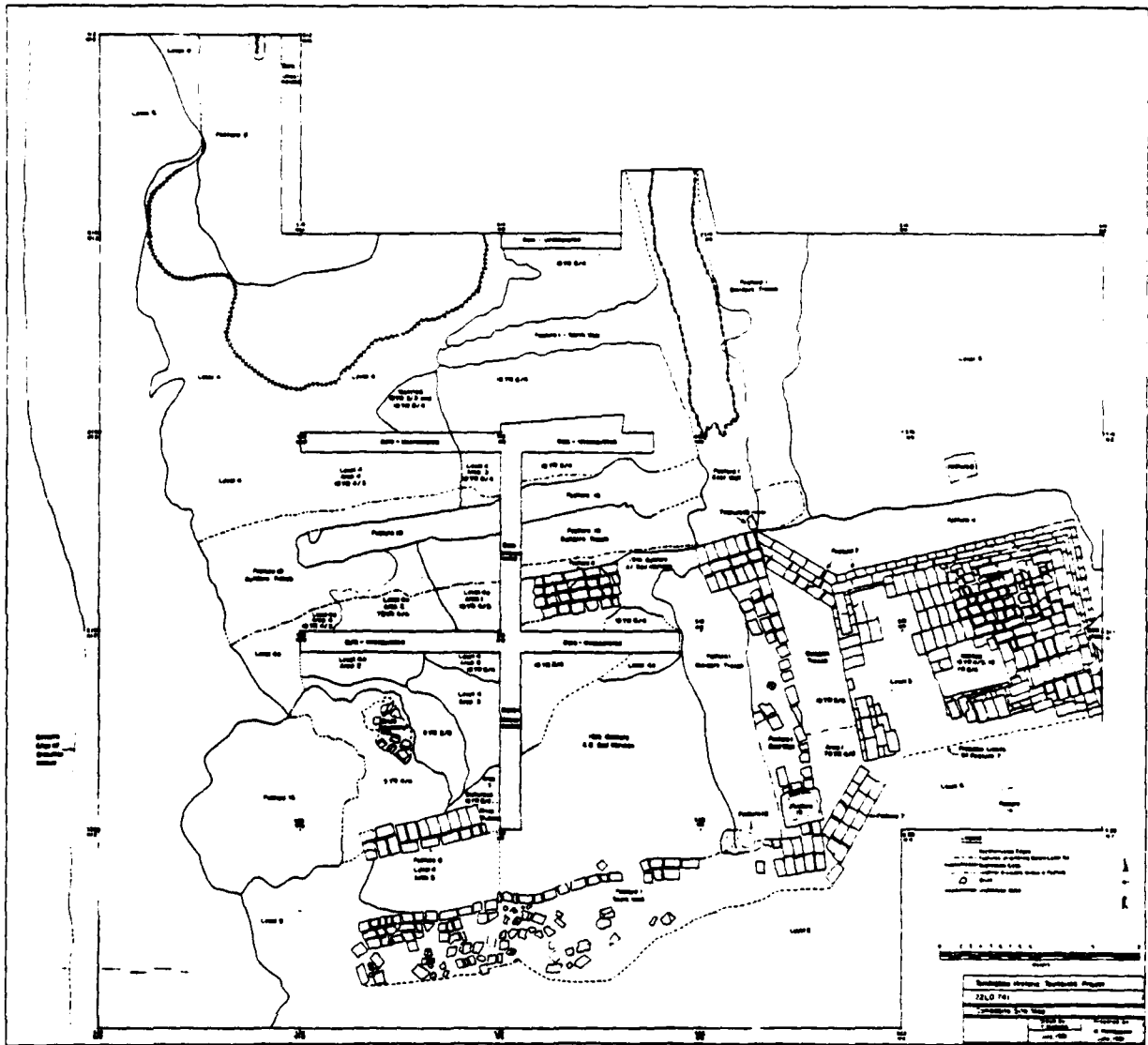


Figure 4. Composite site map.

## GLASS ASSEMBLAGE

During the excavation of 22Lo741, a total of 508 glass fragments were recovered from a variety of contexts. The glass assemblage represents 7.9% of the total artifact assemblage from the site. Only five major functional types of glass are represented in the collection. Although there is a relatively narrow range of glass types, the glass nevertheless provides valuable insight into both the temporal placement of the site and the nature of some of the activities that took place during the utilization of the site. A full discussion of the overall significance of the glass assemblage is deferred to the discussion of internal correlations.

### I. Window Glass

A total of 258 fragments of flat plate window glass was recovered from various contexts and accounts for 50.8% of the glass assemblage. All of the flat glass exhibits a greenish tint and is free of air bubbles. Since it has been postulated that the thickness of window glass has chronological significance (Demeter and Lowery 1977:78-80), some remarks concerning the sample from 22Lo741 are warranted. Although the glass ranges between 1 mm and 2 mm in thickness, only a very small proportion of these actually fall below 1.5 mm thick; the mean and mode thickness is 1.5 mm. These measurements must be viewed with caution as several specimens exhibited variations of several tenths of a millimeter across their surface. In particular, the largest piece, measuring 4 x 4 cm in size, ranged between 1.4 and 1.9 mm thick. None of the window glass exhibits any sign of being heat affected. Table 2 provides the provenience, frequency, and partial description of the window glass. Temporal significance and distribution of the glass are discussed below.

### II. Bottle/Jar--Lip/Neck Fragments (Figure 5)

Fourteen lip/neck fragments representing a minimum of seven different vessels have been subdivided by functional type and glass color. They account for 2.8% of the glass assemblage.

#### A. Alcoholic Beverage

Nine alcoholic beverage lip/neck fragments representing three separate vessels were recovered from the site. The four fragments composing Vessel 1 are medium olive green to green in color, Vessel 2 is dark olive green ("black glass"), and Vessel 3 is medium olive green.

Vessel 1 (Figure 5a) is a fragmentary lip and neck from a champagne/sparkling wine bottle. This designation is based on morphological similarities with identified vessels pictured in Spivey *et al.* (1977: 40) and Switzer (1974:24, 26). The fragment is composed of three pieces that fit together (two from the surface and one from Unit 20, Level 4, Area 2,



Table 2. Window Glass.

Provenience	No. of Specimens	Weight (gm)	Thickness (mm)
Surface	17	21.8	1.5-1.7
Unit 3, Level 3/4, Area 2	1	4.0	1.5
Unit 4, Level 3/4	17	9.8	1.0-1.5
Unit 6, Level 4	7	4.4	1.4-1.6
Unit 7, Level 2	1	0.4	1.5
Unit 8, Level 1	1	1.2	1.2
Unit 9, Level 3	7	7.2	1.5-2.0
Unit 10, Level 3	9	5.5	1.5
Unit 10, Level 4	7	3.9	1.0-1.5
Unit 10, Level 4, Area 2	8	8.9	1.7
Unit 10, Level 4, Feature 9	4	4.3	1.5
Unit 11, Level 4, Feature 1	23	13.6	1.4-1.9
Unit 12, Level 4, Feature 5	4	2.8	1.5
Unit 13, Level 4	1	0.6	1.3
Unit 16, Level 4	6	3.7	1.5
Unit 18, Level 4, Area 1	1	0.7	1.5
Unit 19, Level 4, Area 4	2	1.0	1.4-1.7
Unit 20, Surface	1	1.3	1.5
Unit 20, Level 4, Area 2	10	8.3	1.2-1.6
Unit 21, Level 2	2	2.6	1.5
Unit 21, Level 4	1	0.3	1.6
Unit 21, Level 4, Area 2	8	9.2	1.4-1.6
Unit 22, Level 2	16	10.7	1.5
Unit 22, Level 3	3	1.6	1.5
Unit 22, Level 4	4	3.3	1.0-1.5
Unit 23, Level 2	6	6.5	1.5
Unit 24, Level 2	6	3.1	1.4-1.5
Unit 25, Level 4, Feature 9	82	93.2	1.4-1.9
Unit 26, Level 4, Area 4	2	1.4	1.6-1.9
Unit 27, Level 3	1	0.5	1.1



Figure 5. Alcoholic beverage bottle fragments.

- |              |                         |
|--------------|-------------------------|
| a) Vessel 1  | f) Wine bottle shoulder |
| b) Vessel 2  | g) Wine bottle neck     |
| c) Vessel 3  | h) Vessel 13            |
| d) Vessel 4  | i) Wine seal            |
| e) Vessel 13 | j) Vessel 8             |

a disturbed context) and one that does not join with the others (from Unit 13, Level 4). This fourth piece has been designated as part of Vessel 1 on the basis of color, sherd thickness, outside diameter, and most importantly, similarities in the overall shape, depth, and direction of the markings imprinted on the neck during manufacture. These markings result from the final formation and finishing of the lip and neck of the vessel on the marver. A marver is a curved wooden board used by the glass blower to shape the neck and shoulder of a bottle. To a certain degree, these markings can be considered unique to each vessel.

Although the entire length of the neck is not present, it appears to have been a relatively long-necked vessel. The neck walls are vertical to slightly tapering, widening toward the base. The specimen is 64 mm long, the outside diameter at the base of the fragment is 30.5 mm, and it is 27 mm at the distal end. The orifice is 18 mm in diameter. Below the lip 13.5 mm is an applied string rim that is well made and uniform in both height (8 mm) and thickness (4 mm).

Vessel 2 (Figure 5b) the second alcoholic beverage bottle lip/neck fragment, is composed of a single wine bottle fragment recovered from the surface. Manufactured from dark olive green glass, also known as black glass, the specimen has an applied double collared "blob" top lip. The orifice diameter is 15.5 mm and the outside diameter of the neck is 26 mm below the lip. The lip (collar) is 17.5 mm in height and 8 mm thick.

Vessel 5 (Figure 5g) consists of the lower portion of a neck from a wine or sparkling wine/champagne bottle. Half of the vessel was recovered from the surface (two fragments) while the other two fragments were recovered from the southern third of the builder's trench associated with Feature 1 (Unit 3, Level 4, Area 3). The walls of the neck appear to be vertical at the top, gradually sloping outward into a long tapered shoulder. The upper portion of the fragment has an outside diameter of 25.5 mm and an internal diameter of 15 mm. Although the vessel displays no mold seams, there are grooves characteristic of the drawing and finishing of a neck by hand, indicating that the bottle was at least partially hand-made. Portions of the vessel have been burned.

#### B. Nonalcoholic Beverage

A single small light green nonlead glass lip fragment from an apparent soda bottle, Vessel 3, was recovered from the surface of the site (Figure 5c). The specimen exhibits portions of a single collar; the lip is not present. The orifice diameter and collar were unmeasurable. The vessel exhibits two fine machine-made mold seams, one extending through the equator of the collar and the other immediately below the collar. This vessel is considered a recent introduction to the site.

C. Inkwell (Figure 6)

Fragments of a single dark olive green mold-blown inkwell were recovered from Feature 9. It is circular and 58 mm in diameter, with straight walls and a flat top. Although the base is missing, it was at least 38 mm in height. The specimen exhibits a zoned decorative motif. There is a series of embossed horizontal ribbing around the basal portion of the body, which is capped by a horizontal rib. The upper half of the inkwell exhibits short embossed ribbing arranged radially. The orifice is 8.2 mm in diameter. The pattern on the inkwell has been identified as originating from the Keene Glass Works, Keene, New Hampshire. This pattern is unique to this glass works, where it was produced in quantity, and is known as pattern GIII-29 (Wilson 1972: 165-166).

D. Unidentified

1. Light Green

A single light green nonleaded glass lip/neck fragment was recovered from Unit 17, Level 4 and has been designated as Vessel 4 (Figure 5d). The specimen has a well-tooled applied lip, a single collar measuring 6.2 mm in height and is a maximum of 3 mm thick. The walls of the neck are straight and it is relatively short, measuring only 25 mm long. The vessel appears to have had a relatively short sloping rounded shoulder. No mold seams are present: it is presumed to have been mold-blown. Although identification of vessel type is uncertain, it may be related to some type of proprietary/medicinal bottle.

2. Olive Green

Two medium olive green neck fragments from an unidentified vessel type were recovered from the site. The glass is free of air bubbles, and neither specimen exhibits a mold seam or marver markings. Based on the sharpness of the sherds' curvature, these specimens have been classed as neck fragments. Measurement of the neck fragments' diameters was not possible. One specimen was recovered from Unit 3, Level 4, Area 2 and the other from Unit 6, Level 4. Neither was assigned a vessel number, nor could they be associated with an identified vessel.

III. Bottle/Jar--Body Fragments

A. Alcoholic Beverage

One hundred ninety-four body sherds representing three functional categories account for 38.2% of the glass assemblage.

1. Aquamarine

Five mold decorated body sherds from a historical flask were recovered from the site: four from Feature 9 (Unit 25) and one from Unit 20, Level 4, Area 2 (a disturbed context). These sherds are believed to represent Vessel 6 (Figure 7a).

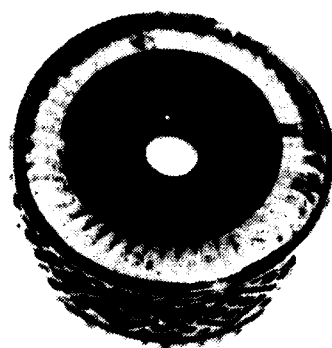


Figure 6. Inkwell.

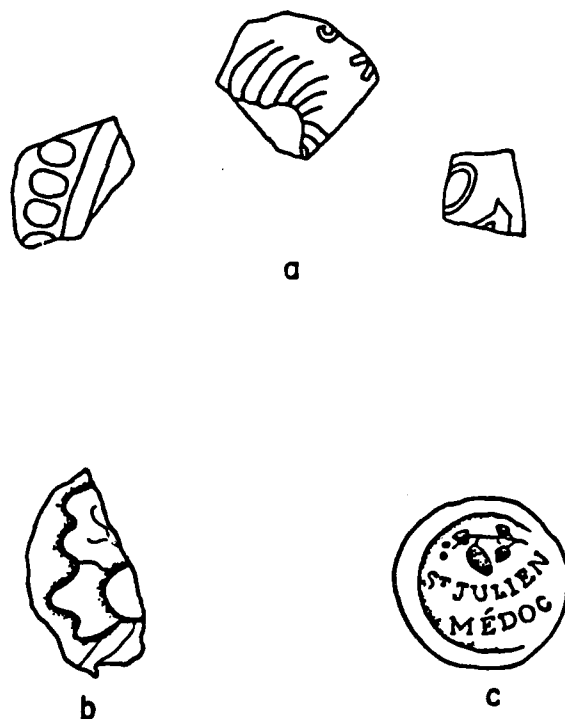


Figure 7. Marked glass from 22Lo741.

- a) Three decorated aquamarine body sherds from a Jacksonian historical flask (Vessel 6)
- b) Olive green decorated body sherd from a decorative flask (Vessel 7)
- c) Wine seal

Three fragments are from the edge of the flask and exhibit a linear series of embossed oval beads. A shallow impressed groove runs along the inner edge of the beading. Another fragment, also from near the edge, displays an embossed, six-pointed star. The remaining two body sherds feature portions of embossed letters and figures. One sherd retains the lower portions of the embossed letters "...ON." Based on the direction of the curvature of the sherd, the word appears to be arcing across the lateral edge of the flask. The final sherd from Unit 20 exhibits the lower portions of the embossed letters "JA...." Underlying the letters is a portion of a head with short hair standing on end on top and a portion of the left side of the head.

The combined features of the fragments of Vessel 6, particularly the sherd from Unit 20, have allowed it to be identified as a Jacksonian portrait flask. McKearin and Wilson (1978:540-541) illustrate a number of different Jacksonian flasks. Based on the character of the hair and the embossed star, Vessel 6 appears to be the same as McKearin and Wilson's (1978) GI-65 type. Throughout the nineteenth century, glasshouses of the Midwest and New England produced a variety of historical and pictorial flasks (Munsey 1970:87-89). Jacksonian historical flasks of this type are considered to be typical of the Monongahela and early Pittsburgh district glasshouses and have been specifically attributed to James Taylor and Company of Brownsville, Pennsylvania (McKearin and Wilson 1978:513, 540-541).

## 2. Olive Green

Eighteen olive green body sherds representing a minimum of three vessels were recovered from the site: two are mold decorated (one is a wine seal), and the third is undecorated.

Vessel 7 (Figure 7b) is an embossed mold decorated body sherd from an apparent decorative flask. The motif consists of portions of embossed, stylized fruit and produce. The glass is a deep medium olive green and contains numerous tiny circular air bubbles. The soft edge of the motif indicated that it was initially formed in a mold and then completely expanded to size. The specimen was recovered from the surface.

Identification of the vessel was narrowed down to two types illustrated by McKearin and Wilson (1978:588-589) based on color and the morphology of the embossed motif. The two types are GIII-7 and GIII-11. The former was produced by the Keene-Marlboro St. Glassworks in Keene, New Hampshire, and by the Coventry glassworks of Coventry, Connecticut. The latter type was produced

by the Saratoga and the Mt. Vernon, New York, glass-houses (McKearin and Wilson 1978:580).

Vessel 8 (Figure 5j) is composed of six body sherds. The assignment of all six sherds to the same vessel is based on similarities in color, the presence, amount, and shape of air bubbles, and sherd thickness. The vessel is a medium olive green amber in color, undecorated, and exhibits numerous small to medium sized oval and circular air bubbles. One body sherd displays a blurred mold seam indicative of the bottle having been mold-blown; whether it was made in a two- or three-piece mold is indeterminate. All of the sherds are corner fragments with obtuse corners measuring between 125° and 135°. Vessel 8 was either a hexagonal or octagonal shaped bottle or decanter; its size was indeterminate. A single body sherd was recovered from each of the following contexts: Unit 9, Level 3; Unit 10, Level 3; Unit 20, Level 4, Area 1; Unit 20, Level 4, Area 2; Unit 21, Level 4, Area 2; Unit 26, Level 4, Feature 10.

The following specimens have not been assigned discrete vessel numbers. The first is a wine seal and the second a reconstructed shoulder of a wine bottle. The wine bottle seal was manufactured from a stamped blob of deep olive green glass and exhibits a circular border consisting of a series of small interlinked embossed dots. An embossed grapevine with hanging grape bunches is located at the top of the seal. Underlying this is the word "ST. JULIEN," which is underlain by the word "MEDOC." The words are aligned in a convex pattern across the center of the seal, which is circular and measures 35.5 mm in diameter (Figures 5i and 7c). It was recovered from the surface of the site. Markings on wine seals typically refer to either the beverage contained in the bottle or to the manufacturer (Noel Hume 1968:61-62). The seal recovered from 22Lo741 indicates that it originated from the St. Julien breweries in Medoc, France. Medoc is a short distance northwest of Bordeaux on the coast of France.

Ten sherds have been reconstructed to form a fragmentary shoulder of a wine bottle (Figure 5f). All of the pieces were recovered from disturbed contexts, seven from the surface, one from the surface of Unit 21, one from Unit 21, Level 2, and one from Unit 26, Level 2. It is a deep olive green color and contains an occasional small air bubble. Enough of the specimen is present to allow some generalizations concerning the overall configuration of the bottle. The basal portion of the neck has an



outside diameter of 32 mm, the walls of the neck appear to have been nearly vertical, and the bottle has a short rounded shoulder. The vessel appears to have been relatively narrow, similar to Munsey's (1970:59) Bordeaux type bottle.

B. Nonalcoholic Beverage

A single mold decorated light green body sherd from a Coca-Cola bottle is present in the collection. Although there is only a small portion of a capital "C" on the sherd, it is clearly from a modern bottle and can be considered a recent introduction to the site. It was recovered from the surface.

C. Unidentified

This category includes the vast majority of the vessel glass. Although several specimens are probably derived from alcoholic beverage bottles, they cannot objectively and positively be assigned as such, hence their placement in this category. Based on color, the unidentified sherds are divided into five types. Possible origins of the body sherds are discussed for each group.

1. Clear

Seven clear nonleaded glass undecorated body sherds represent a minimum of one vessel. All of the specimens lack air bubbles and are from a modern machine-made bottle. They were all recovered from disturbed contexts, six sherds from the surface and one sherd from Unit 20, Level 4, Area 2. These specimens are probably recent introductions to the site.

2. Medium Green

One fragment of medium green nonleaded glass was recovered from the surface and is considered to be a recent introduction to the site. It is free of air bubbles and is undecorated.

3. Aquamarine

Fourteen undecorated sherds have been classified as aquamarine in color although they range from light aquamarine to dark aquamarine.

The one fragment of dark aquamarine is free of air bubbles, lacks mold seams, and probably relates to Vessel 14. Recovered from Unit 3, Level 4, Area 2, the fragment is within the color range of dark aquamarine Mason jars.

Four pieces have been classified as medium aquamarine. The glass is nearly free of air bubbles with only an occasional small circular to oval bubble. Two specimens contain a small portion of the shoulder, which appears to have sloped moderately. A single specimen was found from each of the following locations: Surface; Unit 18, Level 4, Area 1; Unit 19, Level 4, Unit 22, Level 4. These pieces appear to be related to Vessels 15 and 16.

The remaining nine pieces have been classified as light aquamarine. They are all relatively free of air bubbles and lack mold seams. All of the sherds except one are thin-bodied; the exception is relatively thick-bodied and was recovered from Feature 9 (Unit 25). The thin-bodied specimens are similar in color and thickness to Vessel 4. Several of these fragments exhibit portions of the shoulder, which appears to have been short, sharply rounded, and nearly horizontal. These specimens were recovered from the following locations: Surface; Unit 2, Surface; Unit 3, Level 4, Area 2; Unit 25, Level 4, Feature 9; Unit 27, Level 4, Feature 1.

4. Light/Medium Olive Green

Fifty-four light to medium olive green body sherds were recovered from various locations. Most of the specimens are undecorated. The one mold decorated specimen, recovered from the surface, exhibits part of a low embossed "F," has a moderate amount of small circular air bubbles, and was presumably mold-blown.

On the basis of color and sherd thickness, six specimens are believed to relate to Vessel 1. All of these pieces were recovered from Feature 9 in Units 10 and 25. The glass exhibits occasional small circular and oval air bubbles. The surface of the two larger pieces is finely pockmarked from contact with the mold. None of the specimens exhibits mold seams. One specimen is slightly rippled perpendicular to the curvature of the sherd.

An additional specimen very similar in color to the above sherds was also recovered from Feature 9. It is much thinner than the above pieces and probably derives from a different vessel.

The remaining 46 sherds are light olive green and exhibit a moderate amount of small circular air bubbles. These fragments derive from a minimum of four discrete vessels, presumably wine bottles. Individual vessel numbers were not assigned to these body sherds, which were recovered from the following locations: Surface; Unit 3, Level 4, Area 2; Unit 4, Surface; Unit 10, Level 4; Unit 10, Level 4, Feature 9; Unit 11, Level 4, Feature 1; Unit 13, Level 3; Unit 15, Level 3; Unit 16, Level 4; Unit 18, Level 4, Area 1; Unit 19, Level 4; Unit 19, Level 4, Area 2; Unit 19, Level 4, Area 4; Unit 20, Level 4, Area 1; Unit 20, Level 4, Area 2; Unit 21, Level 2; Unit 21, Level 4, Area 2; Unit 22, Level 2; Unit 22, Level 3; Unit 22, Level 4; Unit 24, Level 2; Unit 25, Level 4, Feature 9.

#### 5. Dark Olive Green

Eighty-eight specimens have been coded dark olive green in color, and they range from clear dark olive green to an opaque dark olive green ("black glass"). These specimens tend to be free of air bubbles, display no seams, and undecorated. All are believed to derive from alcoholic beverage (wine) bottles, although they technically cannot be coded as such. The dark olive green glass was recovered from the following locations: Surface; Unit 3, Level 4, Area 2; Unit 10, Level 3; Unit 10, Level 4, Feature 9; Unit 11, Level 4, Feature 1; Unit 13, Level 4; Unit 14, Level 4, Feature 1, Subfeature 1; Unit 14, Level 4, Area 1; Unit 15, Level 2; Unit 16, Level 4, Feature 1; Unit 16, Level 4, Area 3; Unit 18, Surface; Unit 19, Level 3; Unit 20, Level 4, Area 2; Unit 21, Level 4, Area 2; Unit 22, Level 4; Unit 23, Level 2; Unit 26, Level 4, Area 1; Unit 26, Level 4, Area 4; Unit 27, Level 4, Feature 1.

#### 6. Brown

Four brown body fragments were recovered from the surface of the site and represent a minimum of one vessel, which appears to be a recent introduction to the site. They are free of air bubbles, patination, and mold seams.

### IV. Bottle/Jar--Base Fragments

Thirty-six base fragments representing three functional categories and nine different vessels account for 7.1% of the glass assemblage.

#### A. Alcoholic Beverage

Thirty-three base fragments of olive green alcoholic beverage bottles were recovered from various contexts and represent a minimum of five discrete vessels, which can be divided into two groups: 1) medium to deep olive green, and 2) dark olive green ("black glass").

The first group consists of four fragments, three of which contain a portion of the basal ring. These pieces were recovered from Unit 10, Level 3 and Feature 9 (Unit 25). The fourth sherd is the upper portion of a kick and was recovered from Feature 9 (Unit 25). The kick appears to have been at least 50 mm deep and conical in shape. Although it displays no distinct empontilling mark, it appears to have been formed by using a bare iron rod. Two basal ring fragments, one from Unit 10 and one from Feature 9, join, forming only the very base of the vessel. The glass is free of air bubbles and exhibits no mold seams. The fragments were too small for measurements to be meaningful.

Along with the kick, these two specimens are believed to be related to Vessel 1 based on similarities in the color and clarity of the glass. The final specimen has been designated as Vessel 10. It is a very clear deep olive green color and is essentially free of air bubbles. The specimen is too small to allow determination of the basal diameter. The kick appears to have been relatively shallow and hemispherical in shape, and the interior is finely pitted. This is characteristic of a sand-coated glass tipped pontil rod (Jones 1971: 69). It was recovered from Feature 9 (Unit 25).

The second group consists of dark olive green ("black glass") base fragments representing a minimum of three vessels. Vessel 11 is the base of a free-blown wine bottle and was recovered from the surface (Figure 8a). The basal diameter is 73.5 mm. Because the base is very irregular, it causes the bottle to wobble. It has a conically shaped kick with a slight protrusion, or "nipple," at its apex. The kick, which is 32 mm deep and 55 mm in diameter at the base, is not symmetrical and exhibits a number of shallow depressions in its side; it appears to have been empontilled on a small bare iron pontil rod. The walls of the vessel body are straight. This vessel is similar in size to the reconstructed shoulder fragment described above and fits Munsey's (1970:59) Bordeaux style bottle.

Vessel 12 is another base of a free-blown wine bottle (Figure 8b). The basal diameter is much larger than Vessel 11, measuring 94 mm, and the foot is slightly irregular. This vessel also has a conical kick with a slight "nipple" at its apex. The kick is fairly symmetrical, exhibiting only a slight nonconformity, which consists of a short depression on one side of the kick. It appears to have been empontilled on a bare iron pontil rod. The kick measures 42 mm deep and is 66 mm in diameter at its base. Vessel 12 is reconstructed from 14 fragments found in situ in a pile in Unit 19, Level 4, Area 1. This vessel conforms to Munsey's (1970:59) Burgundy style wine bottle.

Vessel 13 is also a partially reconstructed wine bottle base (Figures 5e and 5h). It consists of 14 fragments, 13 of which were recovered in association with one another in Unit 16, Level 4, Area 3 (Feature 15). The other fragment was recovered from the surface. These base sherds were also associated with 32 body sherds technically coded as unidentified dark olive green bottle fragments; these latter sherds may belong to Vessel 13.



Figure 8. Alcoholic beverage bottle bases.

a) Vessel 11

b) Vessel 12

Although heavily heat fractured, this vessel appears to have been free-blown or blown in a dip mold. The base is even and well-formed, the diameter is 76 mm, and the vessel walls are straight. It was not possible to join the kick with any of the other base fragments, rendering a depth measurement impossible. Minimally, however, it was 63 mm deep. The kick is conically shaped on its lower half, while the upper half shifts into a dome shape. Although much of the apex of the kick is missing, the bottle appears to have been empontilled on a bare iron pontil rod.

B. Foodstuff

A single small dark aquamarine base fragment from a foodstuff jar was recovered from the surface and has been designated as Vessel 14. The glass is free of air bubbles and exhibits no mold seams. The fragment was too small to obtain a basal diameter measurement. Vessel 14 falls in the color range typically associated with Ball jars. Although the specimen was recovered from the surface, it is believed to be associated with the nineteenth century occupation of the site.

C. Unidentified

The first two artifacts recovered from 22Lo741 were two medium aquamarine empontilled bottle bases designated as Vessels 15 and 16 (Figure 9 ). The two bases are virtually identical. The glass is free of air bubbles, both specimens lack mold seams, and the vessels were apparently made in a three-piece mold. Both exhibit a circular glass rod pontil mark in a shallow hemispherical kick. Vessel walls are vertical. These two vessels could be some form of nonalcoholic beverage bottle or proprietary/medicinal bottle. Vessel 15 has a basal diameter of 55.5 mm and the kick is 8.7 mm deep. The outside diameter of the pontil mark is 22.5 mm and the inside diameter is 10 mm.

Vessel 16 has a basal diameter of 56 mm and the kick is 10.3 mm deep. The outside diameter of the pontil mark is 22 mm and the inside diameter is 10.5 mm.

V. Tableware

Three fragments of clear leaded glass have been identified as tumbler fragments. These include one small rim, one body, and one base fragment.

The base has been designated as Vessel 17 and was recovered from the site surface. It is clear with only occasional small circular air bubbles. Although most of the sides of the tumbler is broken off, they appear to have been straight. It is not possible to determine whether the vessel was square, hexagonal, or octagonal in shape. The base is unmarked except for a circular mold seam in its center. Basal diameter was indeterminate.

The rim sherd has been designated as Vessel 18. It is undecorated, free of air bubbles, and of indeterminate size. The rim is plain and rounded in cross section.

The single body sherd is similar to Vessel 18. Both the body and rim sherds were recovered together from Feature 9 (Unit 25).

#### VI. Other Glass

Three specimens of burned and melted glass were recovered. The original shapes of all of the pieces are too distorted for identification. One piece, from the surface of the site, is gray and bluish black in color. The other two specimens are medium green. One was recovered from Unit 6, Level 4 and the other from Unit 20, Level 4, Area 2.

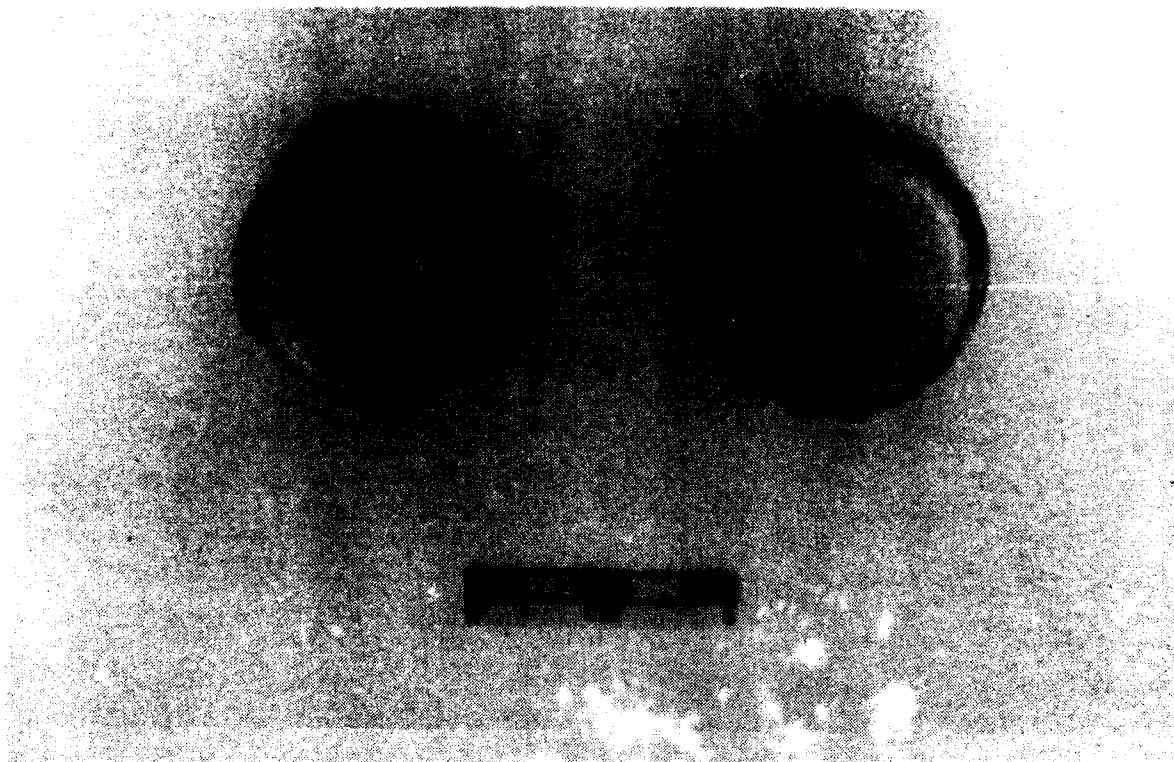


Figure 9. Vessels 15 and 16.



## CERAMIC ASSEMBLAGE

A total of 1,913 ceramic artifacts accounts for 29.9% of the total artifact assemblage. These remains have been divided into three main categories: structural, smoking pipe, and ceramic vessels.

### I. Brick

The brick assemblage accounts for 96.5% of the ceramic assemblage and contains 1,845 whole and fragmentary soft-fired bricks. There were two varieties of brick: glazed and unglazed. The glazed bricks were glazed on one face only with a greenish gray lead glaze and consisted of six whole bricks and 226 fragments, weighing 23.5 kg. Unglazed bricks were predominant with 48 whole and 1,549 fragments, weighing 94.9 kg. These figures represent only a small sample of the total brick at the site. Virtually all of the cultural levels at the site contained brick fragments in varying quantities, and a vast majority of it was generated after the structure had burned. Because of its prevalence, excavators saved a representative judgmental sample of brick from each excavation level and feature; they also saved a sample from each horizontal course of bricks in Features 1, 7, 8, and 11. The remaining brick was discarded without quantification. Complete bricks tended to measure 20 cm (3 in.) long, 9.4 cm (3.7 in.) wide, and 5.8 cm (2.3 in.) thick with a standard deviation of 2.5 cm on each side. Several half (approximately 10 cm long by 9.4 cm wide by 5.8 cm thick) and three-quarter size (approximately 15 cm long by 9.4 cm wide by 5.8 cm thick) bricks were also employed in the construction of the cotton gin. Specific instances of their utilization are discussed in the unit and feature descriptions.

### II. Smoking Pipe

One small bowl fragment from a detachable stem earthenware pipe was recovered from Feature 9 in Unit 25 (S14 W12) and accounts for 0.05% of the ceramic assemblage. The bowl is vertically fluted and covered with a yellowish green lead glaze, and the rim is subrectangular in cross section. Bowl size was not measurable.

### III. Decorated White Paste Earthenware

#### A. Simple Banded (Figure 10j)

A single rim sherd (Vessel 1) accounts for 1.5% of the ceramic dinner and kitchen wares. The vessel appears to have been a small bowl 15.2 cm (6 in.) in diameter, and it is decorated with a single dark brown slipped band 3.5 mm wide just below the lip. In cross section the rim is rounded and flares slightly outward. The sherd was recovered from Unit 27 (S16 W6), Level 3, immediately outside of the structure.

#### B. Painted (Figures 10f-i)

Twelve handpainted underglaze polychrome ceramic sherds represent a minimum of two vessels (Vessels 2 and 3) composed

of 4 rim, 4 body, and 4 base sherds. Both vessels were recovered from the western side of the site, mainly from Level 4. Two of the sherds were associated with the burned zone in Units 18 (S20 W10) and 21 (S20 W12) (Feature 16), and three sherds were recovered from disturbed contexts: the site surface; Unit 22, Level 2; and Unit 20.

Vessel 2 is a thinly potted saucer 12.7 cm (5 in.) in diameter and decorated on the interior with stylized flowers painted in the Late Gaudy Dutch style (Figures 10f, 10h, and 10i). The flowers are characterized by thin black stems with green leaves and stylized dark blue and red flowers (Demeter and Lowery 1977:66-67). The rim is thinned and rounded in cross section and the foot is low and angular in cross section.

Vessel 3 is also a thinly potted saucer 12.7 cm (5 in.) in diameter. It too is decorated on the interior in the Late Gaudy Dutch style (Demeter and Lowery 1977:66-67) (Figure 29g). The rim is rounded in cross section, and the vessel has a single foot ring that is subrectangular in cross section. C. Transfer Print (Figures 10a-e and 11)

Thirty-nine transfer printed sherds account for 58.2% of the table and kitchen wares. Based on color, these sherds are divisible into three groups.

1. Old Blue

Thirty sherds, 11 rim, 6 body, and 13 base, represent a single plate (Vessel 4) 19.8 cm (7.8 in.) in diameter with a 3 cm wide lip (Figure 30). The rim is rounded in cross section and the base has a single low foot ring. Decoration is a deep cobalt blue transfer print located on the vessel interior. This type of transfer printing is commonly known as Staffordshire Blue (Demeter and Lowery 1977:69; Little 1969). The transfer print is a Staffordshire scenic design consisting of a castle and a lake in the center of the plate. Such scenic designs were typical of transfer printed ceramics manufactured by William Adams (Little 1969:26). There are two people sitting in a canoe on the lake and two lovers walk the lake shore in the foreground. Around the vessel lip, trees and bushes border the scene, and a fuzzy, feathered pattern borders the vessel rim. The exterior glaze exhibits a distinct blue cast characteristic of pearlwares. A fragmentary maker's mark consists of a spread eagle with the words "...MS & CO WARRANTED" encircling the eagle, and the partial word "SEMI CH..." is situated between the outer ring of words and the eagle's head (Figure 12a). The mark probably belongs to William Adams and Company of Staffordshire, England.

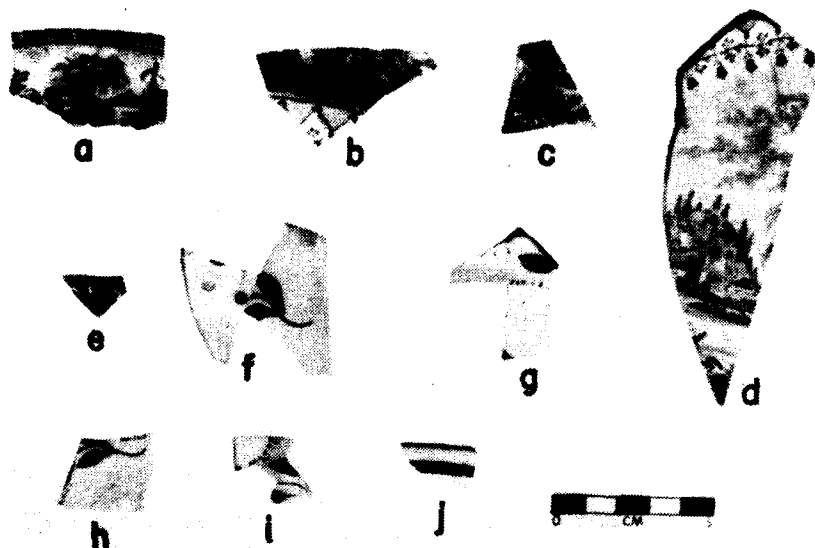


Figure 10. Ceramics.

- |                             |                                       |
|-----------------------------|---------------------------------------|
| a) Brown transfer print     | f) Polychrome rim and base (Vessel 2) |
| b) Brown transfer print     | g) Polychrome rim (Vessel 3)          |
| c) Brown transfer print     | h) Polychrome base (Vessel 2)         |
| d) Brown transfer print     | i) Polychrome rim (Vessel 2)          |
| e) Black transfer print rim | j) Simple banded rim (Vessel 1)       |



Figure 11. Old Blue plate (Vessel 4).

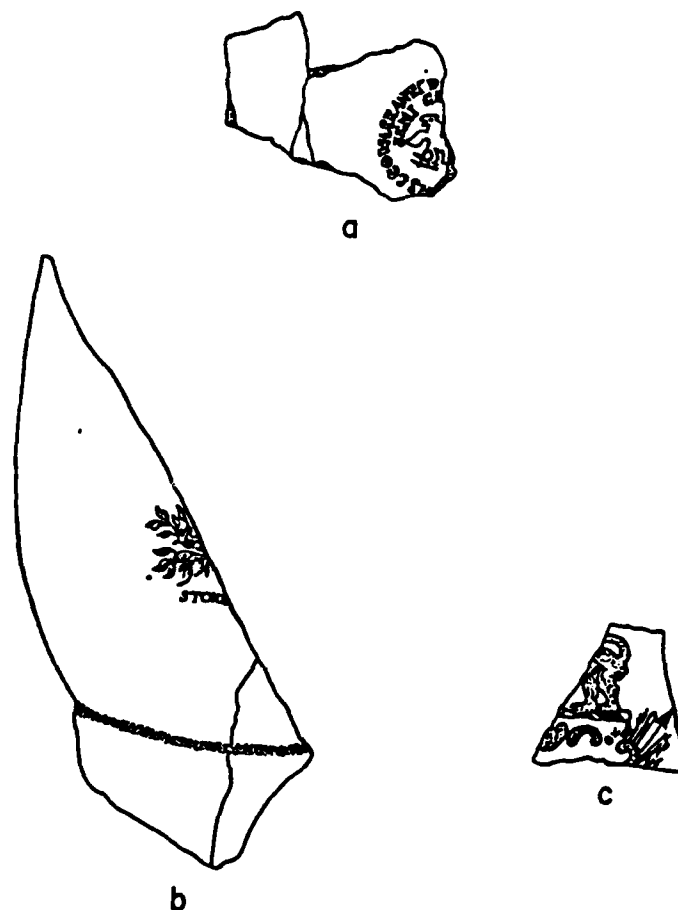


Figure 12. Ceramic maker's marks from 22Lo741.

- a) Impressed maker's mark on Vessel 4
- b) Brown transfer printed maker's mark
- c) Brown transfer printed maker's mark

Fragments of Vessel 4 were recovered in the southern and western portions of the site. Six rim sherds, two body sherds and two base sherds were recovered from the fill of the builder's trench associated with the brick portions (southern) of Feature 1. An additional 10 sherds to Vessel 4 were recovered from disturbed contexts (Surface; Unit 23, Level 2; Unit 24, Level 2; and Unit 28, Level 2). The remaining sherds were recovered from Levels 3 and 4 in Units 19, 20, and 22.

2. Brown (Figures 10a-d)

Eight brown printed sherds--four rims, two body and two base sherds--represent a minimum of two vessels. Five of the sherds were recovered from the surface of the site. Two rim sherds (Vessel 6) were recovered from Unit 1, Level 4, located on the northern side of the structure; the remaining sherd, a base with the "STOKE" maker's mark, was recovered from Feature 9.

Vessel 5, a plate of indeterminate size, consists of two small rim sherds recovered from the surface. The vessel edge is scalloped and the rim is rounded in cross section. Decorated on the interior with an unidentified brown pattern, all that shows is a stylized flower and a series of sequential triangles underlain by two lines and dots forming a border.

Represented by at least two rim sherds, Vessel 6 is a plate 22.8 cm (9 in.) in diameter with a decorated interior. The lip appears to have been divided into panels separated by zones of brown stippling and white flowers; the panels are filled with an urn and ships in the foreground and mountains in the background (Figure 10a). This rim sherd has a rounded cross section.

The remaining two body and two base sherds appear to represent portions of the above two vessels, although it is not clear which sherds belong to which vessel. Both bases contain fragmentary marker's marks and neither has been identified. One base exhibits a bunch of leafy branches underlain by the word "STOKE..." (Figure 12b). The interior of this sherd depicts a harbor scene with hills and buildings in the background (Figure 10d). The other base displays the rear end of a lion underlain by a stylized leaf border (Figure 10c).

3. Black

A single small black transfer printed rim sherd was recovered from the southern end of the builder's trench associated with Feature 1. Designated as Vessel 7, it appears to be a plate of indeterminate size. The rim is rounded in cross section. Identification of the pattern design was not possible; all that remained of the print was a sequence of small mushrooms forming a border along the vessel edge (Figure 9e).

D. Undecorated White Paste Earthenware

Ten plain undecorated ceramic sherds account for 14.93% of the dinner and kitchen wares. They consist of one rim, five body, and four base sherds and represent a minimum of two vessels (Vessels 8 and 9).

Vessel 8 is a base fragment from a mug or tankard. It has an elongated rounded foot ring and was recovered from Unit 8, Level 2, a disturbed context.

Vessel 9, a plate 25.4 cm (10 in.) in diameter, consists of a rim sherd recovered from the surface. The rim is rounded in cross section.

Six of the remaining sherds are thinly potted and on the basis of thickness, they appear to be related to the two Late Gaudy Dutch saucers described above. Most of these sherds were recovered from Level 4 within the structure except for two body sherds recovered from the north side of the structure. Two bases were recovered from the surface. The remaining two sherds, one from the surface and one from Unit 8, Level 3, are plain and do not appear to be related to any of the above vessels. The fragment from Unit 8 is exfoliated.

E. White Paste Stoneware

A single rim sherd accounts for 1.5% of the dinner and kitchen wares and represents a thick, heavy-bodied flatware vessel, probably a platter. Vessel diameter is 30.5 cm (12 in.) and the rim is subrectangular in cross section. Because this sherd was recovered from the surface the association of this plain undecorated vessel with the cotton gin is problematic.

F. Color Paste Stoneware

Four sherds representing a single vessel (Vessel 11) were recovered from the surface of the site. Vessel 11 is a circular utilitarian jug that is salt glazed over a brown colored body; a dark reddish brown lead glaze coats the interior. Portions of the lip and neck are present: the neck is 14 mm long and the lip flares slightly and is 16 mm long; the orifice diameter is 2.5 cm (1 in.). This vessel also has rounded shoulders and resembles sherds recovered from 22Lo734 a domestic site a short distance south along the terrace edge. Because of this and their recovery from the surface, the association of Vessel 11 with the cotton gin seems tenuous at best.

## METAL ASSEMBLAGE

The metal assemblage from 22Lo741 contains 3,297 specimens that account for 51.5% of the total artifact assemblage. With 12 major categories represented, this assemblage displays the greatest amount of internal variation and includes structural, personal, and activity related artifacts.

### I. Musical Instrument (Figure 13c)

A single fragmentary jew's harp, manufactured from iron and presumably forged, accounts for 0.03% of the metal assemblage and was recovered in situ from Unit 10, Level 3. It has an oval frame head 31 mm wide, tapered shanks, and a diamond shaped cross section. It is 45 mm long and 6 mm thick. The iron vibrator bar is missing.

### II. Arms and Ammunition

#### A. Bullet

One whole lead bullet weighing 5.3 gm accounts for 0.03% of the metal assemblage and was recovered from Unit 7, Level 2, a disturbed horizon outside of the structure. The bullet is too badly mangled to determine caliber size.

#### B. Shot

Although two pieces of shot, 0.06% of the metal assemblage, were recovered from the surface of Unit 4, they are considered to belong to the nineteenth century occupation of the site. One piece is spherical and 4.2 mm in diameter while the other is partially melted. They were both manufactured from lead and weighed 0.5 gm.

#### C. Shotgun Shell

Two fragmentary shotgun shells account for 0.06% of the metal assemblage and both are recent introductions to the site. One specimen from Unit 6, Level 2 has "WINCHESTER RANGER No. 12" stamped on its base, and the other specimen, recovered from Unit 18, Level 2, has "REMINGTON SHURSHOT No. 12" stamped on its base.

### III. Clothing

Three identical whole self shank copper buttons account for 0.07% of the metal assemblage. Each has a plain circular face 21.5 mm in diameter and 2 mm thick, and the back of each face is embossed with laurel leaves around the edge and the words "BEST QUALITY" on either side of the shank, which consists of a single loop 6 mm long and 4 mm wide. Two of the buttons were recovered from the in situ midden (Level 4) in Unit 21, and the third was recovered immediately north in Level 4 of the Unit 22. Both of these units lie along the truncated western edge of the site.



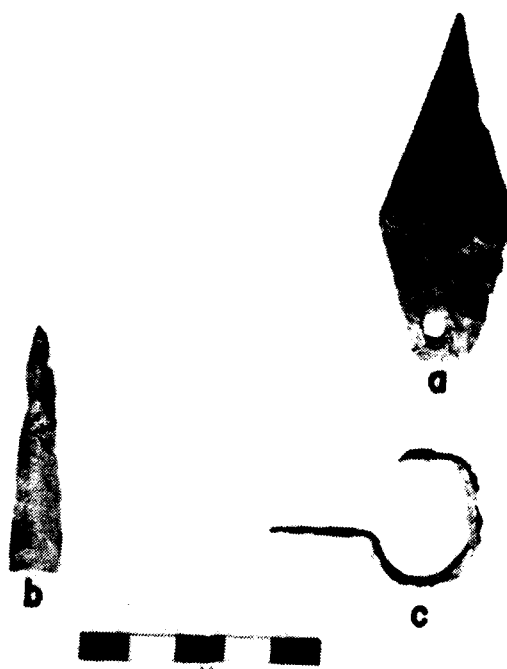


Figure 13. Metal from 22Lo741

- a) possible brace/bracket
- b) miscellaneous blade fragment
- c) jew's harp

#### IV. Container--Can

Five round body fragments and seven body fragments from cans of unidentified shape account for 0.36% of the metal assemblage. All but two of the specimens are relatively small seam fragments. One of the exceptions is a flattened steel can body approximately 7.6 cm in diameter and 16.5 cm long. The second exception is a nearly complete copper can; the specimen is badly crushed and mangled, making any attempts at measuring its size futile. Both specimens were recovered from the surface of the site and appear to be recent introductions. Four of the round body fragments were recovered from Feature 9 (Unit 25), and four of the unidentified body fragments were recovered from Unit 26, Level 4, Area 6, located in the northwest corner of the unit near Feature 10. The remaining two unidentified body fragments were recovered from the surface.

#### V. Hardware--Construction

##### A. Bolt

##### 1. Machine Bolt

Six machine bolts, one whole and five fragments, account for 0.18% of the metal assemblage and represent three different head types. One specimen, from the surface of the site, has a flat rectangular wrought head measuring 44 x 30 mm in plan. It is 16 mm thick, has slightly uneven edges, and a slightly off-center shaft. The bolt has a coarse thread on the lower 31 mm of the shank. The circular cross section is 18.2 mm in diameter.

The second and most numerous head type is flat, square, and represented by four specimens of different sizes. One specimen was recovered from Unit 3, Area 2, which corresponds to the builder's trench associated with the northern half of Feature 1. The head is 3.4 mm across and 4.5 mm thick, and the circular shank is 19 mm in diameter. Two specimens were recovered from Feature 9 (Unit 25). One is 32 mm across, 10 mm thick, and has a circular shank 18 mm in diameter, and the other specimen is 29 mm across, 14 mm thick, and has a circular shank 14 mm in diameter. The fourth specimen, recovered from Unit 26, Level 4, has a head measuring 28 mm across and 10 mm thick, and the circular shank is 18 mm in diameter. The lower portion of the shank on every specimen exhibits a coarse thread.

One specimen from Feature 9 (Unit 25) represents the third head type, which is flat and hexagonal. The head measures 39 mm across and 24 mm thick, the shank is circular and 20 mm in diameter, and the threaded portion of the shank is missing.

## 2. Eye Bolt

A single large eye bolt recovered from an in situ cultural deposit within the cotton gin (Unit 19, Level 4, Area 1) and accounts for 0.03% of the metal assemblage. It measures 22.5 cm long with a 14 cm long shank, and the bottom 3.3 cm are threaded with a coarse thread. The eye bolt was forged from round bar stock 16 mm in diameter.

## 3. Unidentified

Four unidentified bolts--three shank fragments and one whole unidentified bolt type--account for 0.12% of the metal assemblage. The whole bolt was recovered from the rubble fill of Feature 1--North Wall in Unit 11 and is characterized by a square head (26 mm across and 22 mm long) that tapers to a circular shank 22 mm in diameter. Although heavily corroded, it appears to have coarse thread on the lower 3.5 cm of the shank only. The total length of the bolt is 10.1 cm.

The three shank fragments were also associated with the wooden section of Feature 1. Two specimens were recovered from the builder's trench associated with the northern half of the eastern wall of the structure, near the junction of Features 1 and 6 (Unit 3, Level 3/4, Area 2). One specimen is square in cross section (18 mm diameter) and appears to have been forged, and the second specimen has a circular cross section 19 mm in diameter. The third shank fragment was recovered from Level 3 in Unit 11, which straddles Feature 1. It has a circular cross section 27 mm in diameter.

## B. Brace/Bracket

The two braces recovered from 22Lo741 account for 0.06% of the metal assemblage. Once specimen recovered from the surface may have been part of a piece of machinery (joint-winder part) (Noel Hume 1969). It is rectangular (208.3 mm x 23.7 mm x 12.0 mm) and flat, one end is bent at a 90° angle, and the tab is 13.5 mm long. The opposite end flares slightly between 50 mm and 26 mm from the end to accommodate a rectangular hole (15 x 11 mm) in its center. The end then flattens to 3 mm thick and forms a slot to accommodate a 22 mm wide crossbar. This brace was manufactured from iron and was forged.

The second brace (Figure 13a) manufactured from iron, was recovered from the northern end of Unit 3, Level 4 where the northern and eastern portions of Feature 1 join. It is a small, rectangular, slightly convex fragment measuring 46.5 mm long, 40 mm wide, and 3 mm thick. Near the center of the upper third of the specimen, a rusted lump appears to be a rivet head.

## C. Nut

Eight whole square nuts accounting for 0.24% of the metal assemblage were manufactured from iron and threaded to

accommodate a coarse threaded bolt. The holes were centered on all of the specimens except on the one from the surface of the site. Three of the specimens, which exhibit clear rounding of the corners from use, originated from Unit 3, Level 4, Feature 1 (two specimens, and Unit 4, Level 3/4 (one specimen). One specimen from Unit 11, Level 4 still retains a portion of the bolt shank. The square nuts ranged from 28.5-44.0 mm in size, from 12.6-25.0 mm thick, and hole diameters ranged from 11-18 mm. Table 3 lists individual metric attributes of the square nuts by provenience.

D. Rivet

A single copper rivet accounting for 0.03% of the metal assemblage was recovered from Feature 1 in Unit 11. Because it has been used, the head is flat, slightly irregular in shape, and eccentric to the shaft. The rivet is 12.5 mm long, the head is 7.4 mm in diameter, and the shaft is 4.5 mm in diameter.

E. Screw

1. Wood

Five wood screws with flat circular heads and tapering sides account for 0.15% of the metal assemblage. The heads are 14.0 mm in diameter and have a single slot through the center. The shanks are 7.5 mm thick and have a coarse thread. All of the specimens are machine-made, manufactured from iron, and missing their tips, suggesting they had been used. Three specimens were recovered from Unit 4, Level 3/4, one from Unit 19, Level 4, Area 1 (Feature 16), and one from Unit 22, Level 3. The first two were associated with walls, Feature 1 and Feature 10, respectively.

2. Unidentified

Recovered from Unit 26, Level 4, Area 1, a single shank fragment minus both the head and tip accounts for 0.03% of the metal assemblage. It is 8 mm thick and has a coarse thread. In this respect, it resembles the wood screws described above.

F. Spike

1. Cut (Figure 14c)

Two whole and one fragmentary iron cut spikes account for 0.06% of the total metal assemblage. Each specimen is unique.

One whole spike and the fragment were collected from the surface. The whole specimen is rectangular with a flat, square head that measures 14 x 15 mm and 10 mm thick while the shank measures 11 x 9 mm. The head is slightly mushroomed from use, and the distal end is blunted and tapers on two sides. The specimen is 16.8 cm long. The fragmentary cut spike is square (17 mm across) with a flat, square head 30 mm across and 8 mm thick. The distal end tapers on two sides.

Table 3. Nut Measurements.

Provenience	Length (mm)	Width (mm)	Thickness (mm)	Hole Diameter (mm)
Surface	30.3	30.0	14.0	11.0
Unit 3, Level 3/4, Feature 1	30.0	30.8	12.6	15.0
	38.0	34.0	17.0	16.0
Unit 4, Level 3/4	34.0	31.0	16.0	18.0
Unit 11, Level 4	28.5	28.0	15.0	14.0
Unit 25, Feature 9	44.0	45.0	25.0	18.0
	42.0	43.0	19.0	15.0
Unit 26, Level 4, Area 1	41.0	41.0	21.0	16.0

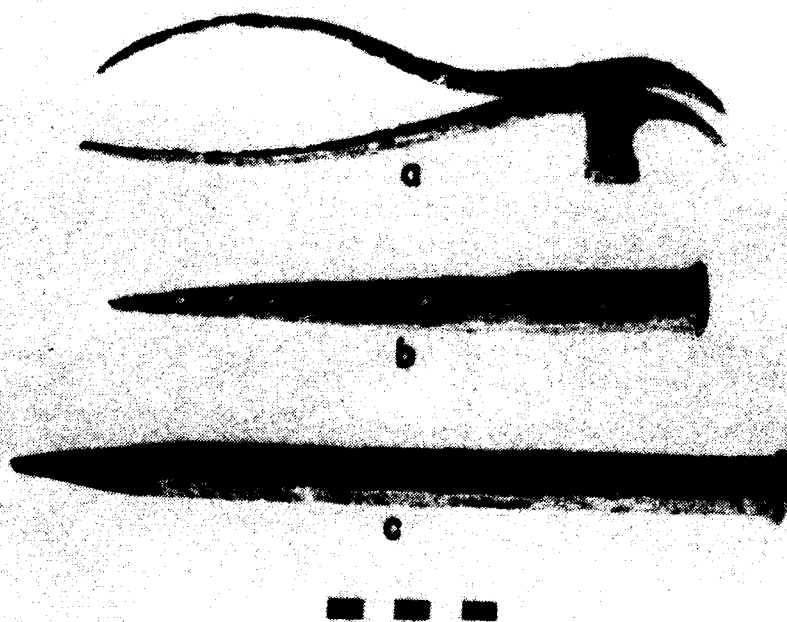


Figure 14. Metal from 22Lo741

- a) pliers
- b) chisel
- c) cut spike

The remaining spike was recovered from the large burned zone (Feature 16) in Unit 21. It is 22.9 cm long and has an octagonal cross section 17.5 mm in diameter. There is no head, although the proximal end of the spike is slightly mushroomed from use. The distal end is a four-sided point.

2. Unidentified

Six heavily corroded iron spike heads accounting for 0.18% of the metal assemblage were recovered from Feature 16, the burned zone in the southwest quarter of Unit 18. All of the heads are convex, forming low domes. They were too heavily encrusted with rust to allow accurate measurement.

G. Wrought Staple

Two iron wrought staples, both from Area 1 in Unit 26, account for 0.06% of the metal assemblage. Both are a square U-shape with square cross sections. One specimen measures 63 mm long, 42 mm wide, and 8 mm thick. The other specimen is 56 mm long, 40 mm wide, and 8 mm thick.

H. Tack

A total of 292 whole and fragmentary small iron tacks account for 8.86% of the metal assemblage. All but one of the tacks are heavily corroded, and the exception provides insight into what the corroded tacks may have looked like. It is machine cut, 18 mm long, and has a small flat rectangular head. The remaining tacks measure between 14 mm and 18 mm.

A total of 232 tacks, or 79.5% of the total, came from the fill of Feature 9 (Unit 25). Unit 9 produced nine tacks in Level 3 and 15 tacks in Level 4. Immediately to the east, Unit 11 produced one tack in Level 3. Between the two units, the fill of Feature 1 yielded 29 tacks (10%). The remaining six tacks were scattered across the site in the following areas: Unit 18, Level 4, Area 2 (one tack); Unit 22, Level 4 (three tacks); and Unit 26, Level 4, Area 1 (two tacks).

I. Washer

1. Disc

Four iron disc washers accounting for 0.12% of the metal assemblage were recovered from undisturbed contexts. Three of the specimens were forged while the fourth was stamped.

One forged specimen, 8.2 mm thick, was recovered from Unit 18, Level 4. It is half a washer with an outside diameter of 60.5 mm and an inside diameter of 30.5 mm.

The second forged specimen was recovered from Unit 4, Level 3/4. It was complete with an outside diameter of 80.0 mm and an inside diameter of 40.5 mm. The washer was 8.7 mm thick.

The third forged specimen is whole and was recovered from Feature 9 in Unit 25. The outside diameter is 50.8 mm and the inside diameter is 47.5 mm. It is oval in shape and the hole is slightly off center. It varies between 4.8 mm and 6.2 mm thick.

The stamped washer is circular and 4.1 mm thick with an outside diameter of 50.5 mm and an inside diameter of 29.5 mm. One face of the washer has two stamped "G"s at 45° and 315°. There are portions of two other "G"s on the edge opposite the complete ones. This washer was recovered from the builder's trench associated with the southern portion of Feature 1 in Unit 3 (Level 3/4, Area 3).

2. Lock

A single lead lock washer accounting for 0.03% of the metal assemblage was recovered from the eastern side of the builder's trench between Features 1 and 7. It is forged from a strip of lead and has an oval shape (49.4 x 59.6 mm outside diameter). The washer is 8.7 mm thick and the inside diameter is 26.0 x 20.5 mm.

3. Square

A single forged iron square washer accounts for 0.03% of the metal assemblage and was recovered from the builder's trench associated with the southern portion of the wooden section of Feature 1--East Wall (Unit 3, Level 3/4, Area 2). It measures 67 x 57 mm in size and is 11.5 mm thick. The hole is centered and measures 24 x 24 mm.

J. U-Bolt

Forged from an iron rod, a single fragmentary U-bolt was collected from the site surface and accounts for 0.03% of the metal assemblage. It is 7.2 cm long, 4.3 cm wide, and U-shaped with a circular cross section 1.1 cm in diameter. The one intact end has been beaten flat.

VI. Hardware--Door/Window

One fragmentary, diamond shaped strap was recovered from Unit 24, Level 2, a disturbed context, and accounts for 0.03% of the metal assemblage. It is flat (2 mm thick) and measures 77 mm long and 30 mm in maximum width. There are two rivets across the widest part of the strap and a 5 mm diameter hole at the broken end.

VII. Hardware--Nails

The nails are by far the most prolific and widespread metal artifact. Based on the method of manufacture, they have been divided into two types: hand wrought and machine cut. The site produced no wire nails.



#### A. Hand Wrought

Thirty-eight hand wrought nails account for 1.15% of the metal assemblage; 28 are whole and 10 are fragmentary. Table 4 presents metric and morphological attributes of the individual specimens.

Of the two head types represented, the most frequent type is an irregular circle with a flat cross section (22 specimens). Twelve specimens have dome shaped cross sections. While all of the heads exhibit faceting from the formation of the head, it is most distinct on the latter 12. These nails are the classic "rosehead" shape (Nelson 1963:3; Stone 1974:229). The heads range between 10 mm and 21 mm in diameter with 18 of the 29 specimens with heads (62.1%) measuring 15 mm in diameter. Thicknesses range between 2 mm and 7 mm with 16 specimens (69.6%) measuring 2 mm. The "rosehead" variety tends to be the outliers in the distribution of thickness. These nails range between 23 mm and 72 mm long with a clustering between 23 mm and 32 mm. Shank diameters range between 3.2 mm and 10 mm with 5 mm being the most frequent (71.4%). All of the specimens with circular heads had round shanks that taper from head to point on all sides.

The second type of head is rectangular and represented by only three specimens: two with flat cross sections and one with a dome shaped cross section. They ranged from 7.5 mm to 14.1 mm in length on the long axis, and thicknesses range between 3.7 mm and 6.0 mm. The shanks on all of these specimens were square, ranging from 4.0 mm to 5.6 mm across, and lengths span a range of 26.4 mm to 83.3 mm. All of the specimens taper from head to point on all four sides.

Regardless of type, all of the heads were eccentric to the shank and asymmetrical in shape. Only partial measurements were available on 12 specimens.

The distribution of hand wrought nails is rather confined. The only discrete clustering occurred in Feature 9 and in Unit 19. In general, these nails are restricted to the northern half of the structure. Hand wrought nails could have been manufactured at the site, although it would not have been a major activity. The limited number of hand wrought specimens may indicate that they were produced on a "need" basis.

#### B. Machine Cut

A total of 1,517 whole and fragmentary machine cut nails account for 46.01% of the metal assemblage. Analysis focused on identifying penny size, head type (i.e., box, common, or finishing), quality of head manufacture, and shear type (opposite or common sides) (Nelson 1963). The nails were recovered in all stages of preservation, from nearly pristine to heavily corroded, which greatly impeded analysis. The large number of fragmentary specimens not identifiable by

Table 4. Hand Wrought Nail Attributes.

Provenience	Specimens	Shank		Shank Cross Section	Head Diameter (mm)	Head Thickness (mm)	Head Shape/ Cross Section
		Length (mm)	Diameter (mm)				
Unit 8, Level 3	1	83.3	5.6	Square	14.1 x 5.0	3.7	Rectangular/Domed
	1	71.4	10.0	Round	20.0	7.0	Irregular circle/Domed
	1	43.0	6.0	Round	10.0	4.6	Irregular circle/Flat
	1	28.1	3.2	Round	14.5	2.0	Irregular circle/Flat
Unit 9, Level 3	1	26.4	4.5	Square	7.5 x 5.9	2.0	Rectangular/Flat
	1	26.4	4.5	Round	13.0	2.0	Irregular circle/Flat
	1	32.3	4.0	Square	9.6 x 10.8	6.0	Rectangular/Flat
	1		5.0	Round	16.0	3.7	Irregular circle/Flat
Unit 10, Level 4	1		5.0	Round	14.0	2.0	Irregular circle/Flat
Unit 11, Level 4, Feature 1	1		5.0	Round	15.5	3.0	Irregular circle/Flat
Unit 19, Level 3	1	32.0		Round			Irregular circle/Flat
Unit 19, Level 4	2	23.0		Round?	15.0	2.0	Irregular circle/Flat - highly corroded
	1			Round?	12.0		Irregular circle/Flat - highly corroded
	1			Round?			Head missing-highly corroded
Unit 19, Level 4, Feature 10	1			Round?	18.0	3.0	Irregular circle/Flat
Unit 20, Level 4, Area 2	1		5.0	Round			Head missing-highly corroded
Unit 22, Level 3	1		6.0	Round	13.5	2.7	Irregular circle/Flat
	1			Round?			Head missing-highly corroded
Unit 25, Level 4, Feature 9	11	23.0	5.0	Round	15.0	2.0	Irregular circle/Slightly domed
	1	41.0		Round?			Irregular circle? - highly corroded
	1	72.0	8.5	Round	21.0	4.0	Irregular circle/Slightly domed
	4				15.0		Irregular circle-highly corroded
	1	60.0	4.0	Square			Head missing
	3						Unmeasurable-highly corroded

penny size (1,014 specimens, or 66.8% of the total) compound this problem. Furthermore, 266 of these specimens consisted of headless shanks only. These were deleted from the analysis.

Penny size and head type were used as the major discriminators of the different nail varieties because virtually all of the identifiable specimens displayed similar shear type on their shanks and similar quality of head manufacture. Well-made, centered head (449 specimens) and nails cut from the opposite sides (443 specimens) were the most frequent varieties. There were only three identifiable exceptions: two had crude machine-made heads and were cut from common sides, while the third also had a crude machine-made head but was cut from opposite sides.

Box nails, commonly known as flooring nails, are characterized by rectangular to almost square heads with flat cross sections. The heads are distinct and have well-defined shoulders, and the shanks taper on two sides only. Direction of the iron fibers was generally indeterminable. A total of 378 identifiable box nails ranges in size between 3d and 20d. Eight-penny and 10d nails are the most frequent, numbering 89 (23.5%) and 92 (24.3%) specimens, respectively. The next most frequent is 12d with 41 (10.8%) specimens. The remaining sizes all numbered less than 25. Seventy-five specimens (19.8%) were unidentifiable in terms of penny size. Table 5 presents individual frequencies.

Common nails are similar to box nails, having rectangular to almost square heads with flat cross sections. Overall, the common nail head is smaller than the box variety and its shoulders are not as broad. The shanks taper on two sides only. Direction of the iron fibers was indeterminable. Of the 87 common nails in the collection, 10 (11.5%) were unidentifiable. The remaining specimens ranged between 3d and 16d. Six- and eight-penny nails were the most frequent varieties, numbering 28 (32.2%) and 21 (24.1%) specimens, respectively. Each of the remaining nail sizes was represented by less than 10 specimens (Table 5).

Finishing nails have very distinct heads. The head is rectangular and in cross section it appears as a short bulbar protrusion at the top of the shank. The shanks taper on two sides only, and the direction of the iron fibers was indiscernible. Only 16 finishing nails were recovered from the site; nine are unidentifiable in terms of penny size, and the remaining specimens range between 5d and 8d in size. None of the different sizes contains more than two specimens each (Table 5).

Table 5. Frequency of Nail Sizes.

HEAD TYPE	PENNY SIZE											Uniden- tified
	3	4	5	6	7	8	9	10	12	16	20	
Box	1 (0.3%)	2 (0.6%)	8 (2.1%)	20 (5.3%)	16 (4.2%)	89 (23.5%)	24 (6.3%)	92 (24.3%)	41 (10.8%)	9 (2.4%)	1 (0.3%)	75 (19.8%)
	4 (4.6%)	1 (1.1%)	(5.7%)	28 (32.2%)		21 (24.1%)	5 (5.7%)	8 (9.2%)	4 (4.6%)	1 (1.1%)		10 (11.5%)
Finishing			2 (12.5%)	2 (12.5%)	2 (12.5%)	1 (12.5%)						9 (56.3%)
	5 (1.0%)	3 (0.6%)	10 (2.1%)	50 (10.4%)	18 (3.7%)	111 (23.1%)	29 (6.2%)	100 (20.8%)	45 (9.5%)	10 (2.1%)	1 (0.3%)	94 (19.6%)
Total												
GRAND TOTAL = 481												

As noted above, the machine cut nails were the most pervasive metal artifact at the site. In fact, except for brick, nails were the most pervasive of any of the artifact categories: virtually every unit and level yielded machine cut nails. Disturbed contexts (Surface; Levels 1 and 2) contained 144 specimens (9.5%) and Level 3 produced 182 specimens (12%). Most of the nails from Level 3 were from units straddling the major wooden walls of the structure and include Units 9-11, 19, 22, 26, and 27. Level 4, exclusive of areas and features, produced 368 specimens (24.3%), once again from those units straddling the major wooden walls of the structure. Areas within Level 4 produced an additional 201 specimens (13.2%) clustered in the central units of the excavation: Units 16, 18, 19, 21, 24, and 26. This area was the interior of the structure's northern half. The various features produced by far the largest body of machine cut nails with 622 specimens (41.0%). The deep feature, Feature 9, produced 47 machine cut nails, post molds produced very few (three specimens), and the remainder derived from Feature 1, 4, 5, and 10. The machine cut nails, where attributable, all related to structural aspects of the building. Nails of this type were not manufactured at the site.

#### VIII. Hardware--Plumbing

##### A. Faucet (Figures 15 and 16)

Four faucets, representing two types, were recovered from in situ deposits within the northern half of the structure and together account for 0.12% of the metal assemblage.

Represented by two specimens, the first type is a simple variety lacking a handle (figure 15). Both faucets were recovered near one another in Unit 3, Level 3/4, Area 3. Area 3 corresponds to the southern portion of the builder's trench associated with the eastern wall of the structure (Feature 1). Both specimens consist of a straight cylinder that is tapered on the spout or distal end and squared on the proximal end. They are 88.5 mm long and have a maximum diameter of 19.6 mm, and the squared portions are 22.8 mm long and measure 12 mm on a side. There is a small hole (2 mm) in the end of this section. The distal end has an outside diameter of 13 mm and an internal diameter of 7 mm. A 2 mm wide bar bisects the spout, and a series of four sequential grooves encircle the end of the spout. Additionally, 20 mm from the spout, there is a 7 mm diameter hole in the side of the faucet that allows for the insertion of a plug in the faucet. Both faucets are manufactured from brass, and one was cast from a poorly mixed batch of brasses. Approximately 75% of the surface exhibits blotches of copper.

Two specimens represent the second type of faucet (Figure 16). They are identical to one another except for the

small flange on the spout of one. One specimen was recovered from Area 2 in Unit 20, Level 4 and the other, with the flange, was recovered from Unit 26, Level 4, Area 4. The specimen from Unit 20 is brass, L-shaped, and 51.6 mm long. The butt end has an outside diameter of 74.5 mm and an inside diameter of 12 mm. There is a simple T-shaped handle halfway along the shaft, and the handle is 25 mm high and 30 mm long. It appears to have been repaired just behind the handle. The spout has an outside diameter of 11 mm and an internal diameter of 7 mm. The proximal end is threaded on the exterior. The specimen from Unit 26 is also brass and L-shaped but measures 64 mm in length. The internal and outside diameters of the inflow and outflow holes are identical to those above. The handle is slightly higher (31 mm) and also T-shaped. This specimen is characterized by the small flange at the bend in the faucet that allowed a container to be hung from the faucet while filling. It is 15 mm long and its upper surface is concave.

#### B. Tubing

Three short fragments of iron/steel tubing account for 0.09% of the metal assemblage. All have an external diameter of 17 mm and the walls are 1 mm thick. All three specimens were recovered from Unit 9, Level 3.

### IX. Hardware--Miscellaneous

#### A. Chain

Seventeen fragmentary pieces of iron account for 0.52% of the metal assemblage. The sections range from single links (12) to pieces 5.5 links long. Table 6 presents chain section measurements. Most of the pieces are simple oval forged links, but three were constructed of twisted links.

The distribution of the chain is very interesting. This is the only artifact category in which most of its members were recovered from contexts outside of the structure. Six specimens were recovered from disturbed contexts (Surface; Unit 7, Level 2; Unit 8, Feature 3), and the builder's trench associated with the southern half of Feature 1 yielded four specimens. Two additional specimens were recovered, one alongside Feature 1--North Wall (Unit 4, Level 4) and one from the northeastern corner of the builder's trench (Unit 27). The remaining specimens were from the interior of the structure.

#### B. Ring/Loop

Five whole forged iron rings, three oval and two circular, account for 0.15% of the metal assemblage. Table 7 lists ring sizes, which range from 52.0 mm to 368.3 mm in diameter and apparently served a variety of functions. Three of the specimens were recovered from disturbed contexts (Surface and Unit 26, Level 2), and the remaining two were associated with Feature 1 (Unit 27) and Feature 5 (Unit 12).



Figure 15. Faucet without handle.

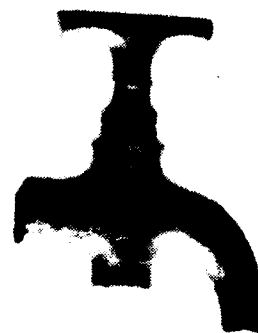


Figure 16. Faucet with handle.

Table 6. Chain Measurements.

Provenience	No. of Links	Length (mm)	Single-Link Width (mm)	Diameter (mm)	Total Length	Type of Link
Surface	2	53.2	36.5	11.0	79.0	Straight
Surface	5	30.2	22.0	7.0	89.0	Twisted
Surface	5.5	The links are irregular:			178.0	Straight
	4 are	51.0	37.5	13.0		
	1 is	69.0	40.0	14.0		
Unit 3, Level 3/4, Area 2	1	72.0	23.0	12.0	72.0	Straight
	1	56.0	37.0	12.0	56.0	Straight
	1	(11.7)	55.0	14.0	11.7	Straight
Unit 3, Level 3/4, Area 3	1	57.0	31.0	9.0	57.0	Straight
Unit 4, Level 3/4	5	26.0	24.0	7.0	79.0	Twisted
Unit 6, Level 4	1	(57.0)	42.0	11.0	57.0	Straight
Unit 6, Level 4	1	28.0	25.0	12.0	28.0	Twisted
Unit 7, Level 2	1	44.0	29.0	8.0	44.0	Straight
Unit 7, Level 2	1	51.0	33.0	8.0	51.0	Straight
Unit 8, Level 3	1	57.0		7.0	57.0	Straight
Unit 8, Feature 3	1	(47.0)	(48.0)	13.0	47.0	Straight
Unit 25, Feature 9	4	66.0	36.0	8.0	170.0	Straight
Unit 26, Level 4, Area 1	4	55.0	36.0	12.5	220.0	Straight
Unit 27, Level 4, Feature 1	1	55.0	34.0	8.0	55.0	Straight

( ) indicates a fragmentary measurement



Table 7. Iron Ring Measurements.

Provenience	Shape	Diameter (mm)	Height (mm)	Thickness (mm)
Surface	Oval	368.3 x 327.7	66.0	17.8
Surface	Oval	73.5 x 66.0	18.0	3.0
Unit 12, Level 4, Feature 5	Slightly Oval	77.0 x 72.0	23.0	4.0
Unit 26, Level 2	Circular	52.0	19.0	3.0
Unit 27, Level 4, Feature 1	Circular	137.0	6.0	3.5

C. Wire

Two small pieces of iron/steel wire account for 0.06% of the metal assemblage. A fragment from Area 1 in Unit 26 measures 57 mm long and 3 mm in diameter. The second specimen was recovered from Level 3 in Unit 27 and is 52 mm long and 3 mm in diameter.

D. Axle (Figure 17a)

One specimen accounting for 0.03% of the metal assemblage has been tentatively identified as an axle of unidentified use. Recovered from Level 4 of Unit 3 near the western edge of Feature 1, it consists of a square iron bar 33 cm long and 19 mm on a side. Each end of the bar has been forged to a circular cross section 19 mm in diameter, and each round section of the bar is 7.5 cm long.

E. Barstock

Fourteen specimens account for 0.42% of the metal assemblage and comprise two types of barstock. The first type consists of flat rectangular bars of iron and the second type is comprised of lengths of round iron bars.

The first variety varies in length from 50.2 mm to 244 mm, in thickness from 2 mm to 14 mm, and in width from 18 mm to 42 mm with a clustering between 30 mm and 37 mm. This cluster accounts for seven of the 10 specimens in this category. Several of the specimens exhibit cutting scars on their ends. Table 8 lists individual specimen measurements. All of the specimens are heavily corroded. Two specimens (one from the surface and the other from Unit 8, Level 3) may be wedges in the initial stages of manufacture. Both have a wedge shaped longitudinal cross section. Because they are heavily corroded, positive identification is impossible.

Four burned specimens represent the second variety of barstock. They range between 80 mm and 135 mm long and all have circular cross sections. Three specimens are 12 mm in diameter while the fourth is 10 mm. The ends of several specimens exhibit cutting scars.

Most of the barstock was recovered from in situ cultural deposits; only the pieces from the surface, Unit 8, Level 3, and Unit 21, Area 2 were not. Most of the barstock occurred as isolated finds in the general midden and the associated A1 soil horizon. These specimens were fairly close (within 2 m) to the oval burned zone in Units 17, 18, 20, and 21. Features 9 and 15 (a structural post) yielded an additional two specimens. Only two specimens were recovered outside of the structure.

F. Block/Ingot

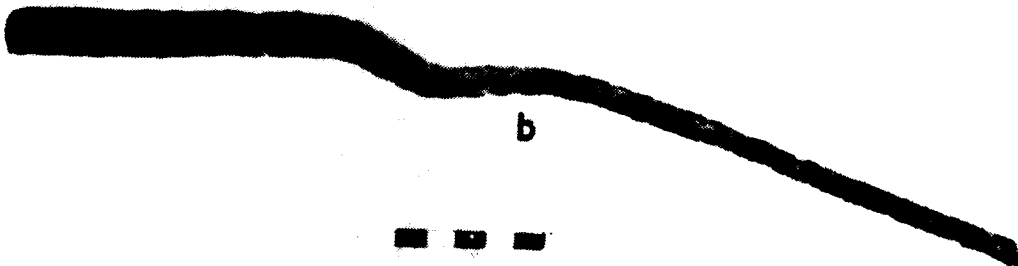
A single fragment of a possible iron ingot accounts for 0.03% of the metal assemblage. Recovered from the site surface, it has a rectangular cross section and was presumably rectangular in shape. The piece is 57.3 mm long, 96.5 mm wide, 48.5 mm thick, and weighs 1.9 kg. The specimen exhibited the characteristic red hue and sheen of burned metal.

Table 8. Barstock Measurements.

Provenience	Shape	Cross Section	Length (mm)	Width (mm)	Thickness (mm)
Surface	Rectangular	Rectangular	73.0	30.0	6.0
Surface	Rectangular	Rectangular	107.0	37.0	7.0-1.0
Surface	Rod	Circular	135.0	10.0	10.0
Unit 6, Level 4	Rectangular	Rectangular	90.5	35.0	8.6
Unit 8, Level 3	Rod	Circular	109.0	12.0	12.0
Unit 10, Level 3	Rectangular	Rectangular	62.3	30.7	6.1-2.1
Unit 10, Level 3	Rectangular	Rectangular	50.2	30.0	7.0
Unit 10, Feature 9	Rectangular	Rectangular	91.0	18.0	2.0
Unit 16, Feature 15	Rod	Circular	80.0	12.0	12.0
Unit 18, Level 4, Area 1	Rectangular	Rectangular	94.0	42.0	8.0
Unit 19, Level 4	Rectangular	Rectangular	244.0	18.0	4.0
Unit 21, Level 4, Area 2	Rectangular	Rectangular	179.0	37.0	4.0
Unit 22, Level 4	Rod	Circular	92.0	12.0	12.0
Unit 26, Level 4, Area 6	Rectangular	Rectangular	104.0	36.0	14.0



a



b

Figure 17. Metal from 22L0741.

a) axle

b) miscellaneous unidentified tool

#### G. Driveshaft (Figure 18)

A single large iron specimen has been tentatively identified as a driveshaft from the powertrain of a cotton gin. It accounts for 0.03% of the metal assemblage. This identification is based on morphological similarities between the specimen recovered from 22Lo741 and a portion of a cotton gin driveshaft pictured in Tompkins (1901:37). Although the specimen was recovered from the surface, it can definitely be associated with the nineteenth century occupation of the site. The object did not appear until bulldozers had exposed the eastern wall of the structure on 9 August 1980. It was recovered from the southwestern corner of the bulldozer cut, which places the specimen just inside (western side) of Feature 1 toward the southern end of the structure. This is in the vicinity of Units 14 and 24.

Figure 18 is a line drawing of the specimen. It is a large squarish iron shaft 1.58 m (5 ft. 2 in.) long and 7.6 cm (3 in.) on a side. Two major sections divide it roughly in half: the right-hand section is four-sided, and the distal 12.7 cm taper on all four sides to a diameter of 3.8 cm; the left-hand side is octagonal in cross section and at the distal end of this section there is a circular bushing 10.2 cm long and 10.8 cm in diameter. Beyond this, the shaft begins to taper on four sides. The terminal 5.1 cm tapers to a point and is round in cross section. Even though a uniform coat of rust covers the specimen, it appears to have been manufactured from a single large bar of iron with the exception of the bushing, which appears to be a separate piece.

#### H. Gasket/Seal

Eight fragmentary pieces of flat brass gaskets account for 0.24% of the metal assemblage. Five of the specimens are 1 mm thick and the other two are 1.5 mm and 2 mm thick. All of the specimens are 26-27 mm wide. Outside diameters are 7.6 cm (3 in.) for six specimens and 12.7 cm (5 in.) for two specimens. Two specimens exhibit small flanges on their inner edges. Three fragments were recovered from the surface of the site and the rest were from Unit 3, Level 4, the general midden along the inner edge of the structure's eastern wall.

#### I. Hook

Feature 9 contained a single apparent hook, which accounts for 0.03% of the metal assemblage. The specimen is straight and 17.5 cm in total length, and the shank flares at a point 52.7 mm from one end. This shorter end tapers on four sides, allowing it to be pounded into a beam or other wooden support. The longer section of the specimen is rectangular in cross section, measuring 10 x 15 mm, and the terminal end of this section is tapered on one side.



Figure 18. Driveshaft from ssLo741.

#### J. Miscellaneous Machine Parts

Eight whole and fragmentary metal pieces have been designated as miscellaneous machine parts. In earlier contexts, such specimens have been termed jointwinder parts (Noel Hume 1969). Accounting for 0.24% of the metal assemblage, these specimens divide into two groups based on the material of manufacture: brass or iron.

The three brass specimens exhibit a degree of similarity. Two are corner fragments of an unidentified machine part. Their exteriors have a 90° corner with a small flange perpendicular to the length along the base of the two intact sides. The flange is 7 mm thick and extends outward 8 mm. One specimen from Unit 3, Area 2 measures 33 mm long, 22 mm wide, and 54 mm high, and the second specimen is 58 mm long, 41 mm wide, and 38 mm tall. All of these measurements are fragmentary and do not reflect the true dimensions of the pieces. The interiors of the specimens are curved, creating an interior diameter of 7.6 cm (3 in.). The third brass specimen was recovered from Unit 20, Level 4, Area 2, a disturbed context. It is a fragment of a cylindrical piece with an internal diameter of 7.6 cm (3 in.). The exterior is also curved and the wall of the piece is 3 mm thick. The base is flanged, measuring 8 mm thick and extending 1 mm from the outer edge of the piece. These three specimens probably held a cylindrical object, which was most likely movable.

The five iron specimens represent three different parts. Two arc shaped specimens are identical and forged from a single piece of iron. The whole specimen has a total length of 246.0 mm. One end is circular (49 mm diameter) and flat (5.5 mm thick) and exhibits a 9 mm diameter hole drilled in it slightly off center. Extending from this section is an arced section 14 mm thick and measuring 31.5 mm at its maximum width. This central section is 122 mm along the length of the arc. The edges of these first two sections are slightly uneven. The third and terminal section is shorter and thicker and appears to be essentially unmodified. Except for the rounding of the end, there is no sign of hammering. This section is 75 mm long and 18.5 mm thick and has a wedge shaped longitudinal cross section thinning from 12 mm to 7 mm in width. It is slotted through its width. The slot is rectangular, with its long axis paralleling that of the machine part. It is located 8 mm from the end and measures 12 x 6 mm. Both specimens are rust-free and exhibit a blotchy, reddish hue from burning. They were both recovered from Unit 4, Level 4 alongside Feature 1--North Wall.

Near the above two specimens, Unit 4, Level 4 also produced a third iron machine part. This is a flat rectangular fragment measuring 81 mm long, 41 mm wide, and 9 mm thick. The body exhibits two adjacent drilled holes 9 mm in diameter. The intact end is cut diagonally and a small

triangular piece protrudes at a 90° angle from its tip. This protrusion is 26 mm across the base and extends 13 mm outward.

Two identical specimens comprise the fourth iron miscellaneous machine part, which was recovered from Feature 9. It is a large fragmentary solid U-shaped flange with a drilled hole. The two specimens measure 66 mm across the base, 26 mm thick, 72.5 mm long, and 26 mm in diameter. The hole is centered and drilled through the thickness. The specimen was burned and broken at one end.

X. Kitchen/Tableware

Accounting for 0.03% of the metal assemblage, a single fragmentary portion of a case knife recovered from the site surface consists of the junction between the blade and the handle. The handle was presumably bone or wood. The unmarked blade is 18 mm wide and 2 mm thick.

XI. Tools

A. Auger Parts

A single whole auger bit recovered from the surface of Unit 2 accounts for 0.03% of the metal assemblage. It is a small bit 12.2 cm long and 5 mm in diameter. The shank is round with the lower 41 mm of the distal end twisted to provide a cutting edge. The proximal end is flattened for attachment purposes.

B. Chisel (Figure 14b)

Two chisels accounting for 0.06% of the metal assemblage were recovered from in situ cultural deposits. One specimen came from the southern end of the builder's trench associated with Feature 1--East Wall (Unit 3, Level 4, Area 3). It is rectangular in both shape and cross section, measuring 17.3 cm x 19.0 mm x 21.4 mm. The head is heavily battered and the bit edge is slightly rounded.

The top of Feature 16 in Unit 21 produced the second specimen, which is very large at 41.2 cm in length. The transverse cross section is circular (16 mm diameter), and the head is battered and mushroomed from use. This chisel exhibits a rather blunt, slightly rounded bit.

C. Files

One whole and four fragmentary files account for 0.15% of the metal assemblage and represent three varieties of files: flat, half-round and round.

Three fragments, two from Feature 9 (Unit 25), and one from Unit 10, Level 3, represent flat files. They all appear to have been rectangular in shape. Two of the files, one from Feature 9 and one from Unit 10, are bastard cut, measuring 27.3 mm wide and 5 mm thick, and 15 mm wide and 4 mm thick, respectively. The third file is smooth cut and measures 19 mm



wide and 4 mm thick. All of the fragments were relatively short lengths (less than 5 cm) except for the bastard file from Feature 9, which was 18 cm long.

A single whole half-round file was recovered from Unit 23, Level 2, a disturbed context, but probably originated from the southeastern corner of the structure. The file measures 297 mm long with a 61 mm long rattail on one end, 35 mm wide, and 10 mm thick. Both surfaces are bastard cut.

A single fragmentary round rattail file represents the round type and was recovered from Unit 24, Level 2, a disturbed context. The smooth cut fragment is 22.1 cm long and has a diameter of 10 mm.

#### D. Hammer Parts (Figure 19)

Four hammer parts, two heads and two wedges, account for 0.12% of the metal assemblage and represent two distinct hammer heads. The first, recovered from the surface of Unit 2, is a whole claw hammer head (Figure 19a) 12.6 cm long. The head is octagonal in cross section, measuring 27 mm on a side and 51.5 mm long. One side of the head displays what appears to be a stamped mark consisting of a rectangular depression 18 x 4 mm in size and no more than 0.5 mm deep. No letters or other identifying mark were visible and if there was originally a mark, it has since been lost to corrosion. The claw element, which is sharply curved downward, is 44 mm long and flares from 29.5 mm wide at the proximal end to 36 mm wide at the distal end. At the center of the hammer head there is a 29.4 mm x 12.0 mm rectangular hole designed to accept a wooden shaft. There is still a small wedge in the hole, indicating that the tool was lost or discarded with the head still attached to the shaft.

The second hammer head type is a small iron tack hammer, which is represented here by a fragment recovered from Unit 3, Level 4, Area 2 (Figure 19b). This area corresponds to the midden along the inside of the eastern wall of the structure near the junction of the wooden and brick sections. The head is 19 mm long and 14.5 mm in diameter, has a circular cross section, and exhibits some battering from use.

Two iron wedges for fastening a metal tool head to a wooden handle were recovered from Unit 22, Level 4 and Unit 26, Level 4, Area 1. The former measures 28.9 mm long, 15.5 mm wide, and 7 mm thick, but the latter is much larger, measuring 42 mm long, 21 mm wide, and 8 mm thick. Both specimens taper on one side only. The larger specimen may have been for an axe, sledge, or other large tool rather than a hammer.

E. Miscellaneous Blades (Figure 13b)

A single unmarked iron blade tip fragment from Feature 9 (Unit 25) accounts for 0.03% of the metal assemblage. It has straight tapering edges with a slight medial ridge on both surfaces, and the transverse cross section is an angular biconvex. The fragment measures 52.7 mm long, 11.4 mm wide, and 3.7 mm thick. This blade fragment has been tentatively identified as belonging to either a dagger or a letter opener.

F. Crowbar

A large cut iron crowbar recovered from the site surface accounts for 0.03% of the metal assemblage. It is 39.9 cm long and has a square transverse cross section 21.4 mm on a side. The flat distal end is slightly mushroomed from hammering, and the proximal end tapers to a straight edge on one face. The tip of the latter end has a small flange. The specimen was burned.

G. Pliers (Figure 14a)

A pair of flat-nosed iron pliers recovered from the fill of Feature 9 (Unit 25) accounts for 0.03% of the metal assemblage. The interior surface of the jaws is grooved, and the lower jaw has a small rectangular foot extending downward from it. This foot has a flat base, measures 14 x 16 mm, and is 19 mm long. The pliers are 19 cm long.

H. Punch

A single punch was recovered from Unit 4, Level 3/4 and accounts for 0.03% of the metal assemblage. It is 8.5 cm long and has a circular transverse cross section 14 mm in diameter. The punch tapers to a point on all sides and the head is flat and mushroomed from battering.

I. Wedges (Figure 20)

Ten wedges in various states of completions and use account for 0.3% of the metal assemblage and range from 88 mm to 180.3 mm long, 30 mm to 46 mm wide, and 10 mm to 37 mm thick. Table 9 presents measurements and comments for the individual specimens.

Slightly more than half of the specimens appear to have never been used or completely finished and are characterized by an unmodified butt exhibiting a burr or groove from cutting. An additional specimen exhibiting a proximal groove has one battered corner, indicating usage, and another specimen has a slightly rounded butt exhibiting no signs of usage. The final two specimens are heavily battered and mushroomed on their proximal ends. The bodies of these specimens are crumpled, twisted, and split.

Two specimens, one recovered from the surface and the other from Unit 10, Level 4, exhibit holes directly below the butt. The hole in the former is very crude and rectangular in shape (11 x 14 mm), and the hole in the latter is square, measuring 8 mm on a side. Both are centered. Bit configuration ranges from straight to slightly rounded. Several are crumpled and twisted, apparently from use.

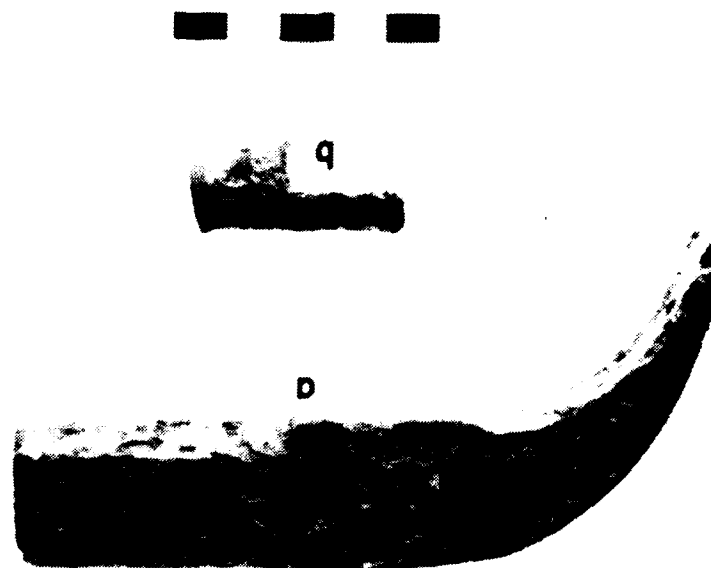


Figure 19. Hammer heads.

a) claw hammer

b) tack hammer



Figure 20. Wedges from 22Lo741.

Table 9. Wedge Measurements.

Provenience	Length (mm)	Width (mm)	Thickness (mm)	Proximal (Butt) End	Distal (Bit) End
Surface	112.0	Butt 38.5 Bit 33.7	Butt 12.5 Bit 2.0	Slightly rounded, not battered	Slightly rounded, twisted
Surface	147.3	Butt 36.4 Bit 36.4	Butt 10.0 Bit 2.0	Unmodified	Slightly rounded, twisted
Unit 3, Level 4, Area 1	122.0	Butt 33.5 Bit 10.0	Butt 32.5 Bit 3.0	Unmodified	Straight
Unit 3, Level 4, Area 2	88.0	Butt 42.5 Bit 41.0	Butt 12.5 Bit 2.0	Unmodified	Straight
Unit 3, Level 4, Area 2	142.2	Butt 36.0 Bit 36.0	Butt 11.0 Bit 4.0	Unmodified; 3.5 cm long split down center	Slightly rounded
Unit 3, Level 4, Area 2	180.3	Butt 42.0 Bit 42.0	Butt 10.0 Bit 3.0	Flat, heavily mushroomed	Slightly rounded; crumpled, bent, and broken
Unit 3, Level 4, Area 2	162.6	Butt 41.0 Bit 41.0	Butt 37.0 Bit 2.0	Flat, slightly mush- roomed	Slightly rounded; crumpled, split
Unit 3, Level 4, Area 3	139.7	Butt 30.0 Bit 30.0	Butt 12.0 Bit 2.0	Unmodified, 1 corner mushroomed	Slightly rounded; twisted, split
Unit 10, Level 4	106.7	Butt 46.0 Bit 30.5	Butt 12.0 Bit 3.0	Unmodified	Straight
Unit 10, Level 4	109.2	Butt 43.0 Bit 28.0	Butt 10.0 Bit 3.0	Unmodified	Slightly rounded

The sequence of manufacture can be reconstructed from the condition of the wedges. All were manufactured from lengths of flat iron barstock and appear to have been cut by cold chiseling. Each piece would be heated and then beaten into a wedge shape. When finished, the distal end would measure between 2 mm and 4 mm thick. The final step toward completing the wedge involved smoothing the burr on the proximal end. In several cases, this step appears to have been neglected. In addition, four of the specimens are split or cracked laterally, possibly indicating the use of inferior iron.

The wedges were highly clustered in two areas, excluding the two found on the surface. Two specimens were recovered from Unit 10, Level 4 in the vicinity of Feature 9, and the remaining six, including all of the heavily used ones, were recovered from Unit 3, Level 3/4, one from the southern end of Area 1, four from Area 2, and one from the northern end of Area 3. These were all in the midden along the inside of the northern half of Feature 1.

#### J. Miscellaneous Unidentified Tools (Figure 17b)

A single unidentified tool from Unit 4, Level 3/4 appears to be an unfinished tool of some form and accounts for 0.03% of the metal assemblage. The specimen has a round handle of unmodified round barstock 14 cm long and 15 mm in diameter. The proximal end of the handle is beaten flat and bent at a 45° angle and gives way to a flat rectangular blade paralleling the handle. The blade measures 20.8 cm long, 2.74 cm wide, and 3-5 mm thick. The blade is otherwise unmodified and unmarked. It was forged from a single piece of iron.

### XII. Unidentified Metal

#### A. Brass

Seventy-one unidentified pieces of brass recovered from various contexts represent 2.15% of the metal assemblage. Based on morphological attributes, the unidentified brass can be divided into several gross categories, each of which is briefly described below. Descriptions and pertinent measurements of the unidentified brass are listed by excavation unit in Table 10.

The first category is comprised of flat scrap, which is characterized by generally small, thin, flat, amorphously shaped fragments of brass that do not exhibit any unbroken edges. Of the 32 specimens assigned to this category, all but six are 1 mm thick; five of the exceptions are 0.5 mm thick and the sixth measures 1.5 mm thick. All of the specimens appear to have been subjected to heat. These pieces may be small scraps of raw material.

Table 10. Unidentified Brass.

Provenience	Category	No. of Specimens	Weight (gm)	Comments and Measurements
Unit 3, Level 3/4, Area 1	Sheet	1	62.7	brass sheet; 66.0 x 63.5 x 2.3 mm
Unit 3, Level 3/4, Area 2	Scrap	8	18.2	1.0 mm thick
Unit 3, Level 3/4, Area 2	Melted	1	20.0	
Unit 3, Level 3/4, Area 2	Convex	1	28.4	5.0 mm thick
Unit 3, Level 3/4, Area 3	Scrap	1	0.8	1.0 mm thick
Unit 4, Level 3/4	Scrap	5	11.8	0.5 mm thick
Unit 4, Level 3/4	Strip	2	30.9	5.5 mm thick
Unit 4, Level 3/4	Strip	1	2.2	3.0 mm thick
Unit 4, Level 3/4	Strip	1	2.8	7.0 mm wide, 1.0 mm thick
Unit 4, Level 3/4	Melted	2	42.5	
Unit 6, Level 4	Scrap	1	1.0	1.0 mm thick
Unit 8, Level 3	Strip	1	16.2	8.5 mm thick
Unit 9, Level 4, Feature 1	Strip	1	6.4	5.0 mm thick
Unit 9, Level 4, Feature 1	Convex	1	1.7	13.0 mm diameter, 2.0 mm thick
Unit 10, Level 4	Scrap	1	0.1	1.0 mm thick
Unit 11, Level 3	Convex	1	145.8	thickness is indeterminable
Unit 11, Level 3	Strip	1	4.2	6.0 mm wide, 5.0 mm thick
Unit 11, Level 4, Feature 1	Scrap	2	4.4	1.0 mm
Unit 11, Level 4, Feature 1	Strip	1	11.1	16.0 mm wide, 2.0 mm thick
Unit 19, Level 4	Melted	2	84.0	
Unit 19, Level 4, Area 1	Scrap	5	16.5	1.0 mm thick
Unit 19, Level 4, Feature 10	Strip	1	4.2	7.0 mm thick
Unit 22, Level 2	Scrap	1	1.4	1.0 mm thick
Unit 22, Level 3	Strip	1	4.7	5.0 mm thick
Unit 25, Level 4, Feature 9	Scrap	7	7.4	1.0 mm thick
Unit 25, Level 4, Feature 9	Convex	1	52.7	7.0 mm thick
Unit 25, Level 4, Feature 9	Convex	1	22.7	2.0 mm thick
Unit 25, Level 4, Feature 9	Strip	1	8.6	1.0 mm wide, 2.0 mm thick
Unit 25, Level 4, Feature 9	Cylinder	1	150.4	mangled; 26.7 cm long, 1.0 mm thick
Unit 25, Level 4, Feature 9	Cylinder	1	25.4	flattened; 60.0 mm long, 1.0 mm thick
Unit 25, Level 4, Feature 9	Cylinder	1	6.2	seam fragment
Unit 26, Level 3	Scrap	1	1.7	1.0 mm thick
Unit 26, Level 3	Convex	1	3.6	2.0 mm thick
Unit 26, Level 3	Melted	1	4.3	

Table 10. Continued.

Provenience	Category	No. of Specimens	Weight (gm)	Comments
Unit 26, Level 4, Area 1	Strip	1	6.6	7.0 mm wide, 6.0 mm thick
Unit 26, Level 4, Area 1	Strip	1		7.0 mm thick
Unit 26, Level 4, Area 1	Convex	2	14.9	3.5 mm thick
Unit 26, Level 4, Area 1	Melted	4	9.4	
Unit 26, Level 4, Area 4	Melted	3	4.7	
Unit 27, Level 4, Feature 1	Strip	1	2.7	3.0 mm thick



The second category consists of flat strips. These 15 specimens are characterized by flat strips of brass with intact edges. Most of these specimens appear to be small tabs or flanges possibly derived from pieces of machinery.

The third category contains seven convex shaped fragments that may be highly fragmented pieces of tubing or pipe. Two are 5 mm and 7 mm thick, respectively, and both pieces bear some similarity to the brass machine parts described above. Of the remaining five specimens, four measure 2 mm thick and one is 3.5 mm thick. One has an estimated diameter of 13 mm. All of these specimens are heat fractured.

The fourth category consists of unidentifiable melted pieces. The 13 specimens assigned to this category are amorphous lumps.

Brass tubes or cylinders comprise the fifth category. The three specimens in this category were recovered from Feature 9 (Unit 25). One is a 26.7 cm long mangled cylinder that has a simple folded over seam and was constructed from a sheet of brass 1 mm thick. The second specimen is a flattened cylinder 60 mm long; it too has a simple folded over seam and was manufactured from a sheet of brass 1 mm thick. The third specimen is a small fragment of a simple folded over seam. The purpose of these cylinders is unknown.

The sixth category contains a brass sheet folded in half. It measures 66 mm by 63.5 mm in size and is 2.3 mm thick. The function of this piece is unknown.

The unidentified brass was confined exclusively to the northern section of the structure. Most of it was recovered from either the general midden or the associated A1 soil horizon (Level 3).

#### B. Copper

Six unidentified fragmentary pieces of copper account for 0.18% of the total metal assemblage. Four of the specimens are heat distorted and partially melted, but the remaining two are 1.4 mm and 0.7 mm thick, respectively. Table 11 presents comments concerning individual specimens.

#### C. Iron/Steel

A total of 380 unidentified fragments of iron/steel accounts for 11.53% of the metal assemblage. Within this large number of pieces, five separate categories were defined: 1) flat, 2) circular, 3) rust lumps, 4) melted, and 5) other (Table 12).

Flat unidentified iron/steel consists of flat fragments of varying thicknesses. These pieces range from thin sheets 1 mm thick to fragments of iron plate 11-13 mm thick. Based on thickness, there are several distinct clusters within this subgroup. Of the 266 pieces in this subgroup, 80% are 1 mm thick. The frequency of the pieces between 2 mm and 6 mm thick drops off dramatically and together they only account for 7.5% of the total. The pieces from 1-3 mm thick are

Table 11. Unidentified Copper.

Provenience	No. of Specimens	Weight (gm)	Comments
Unit 9, Level 4	1	13.3	Melted, flat
Unit 9, Level 4, Feature 1	1	47.7	Melted, flat
	1	3.9	Convex, heat-distorted
Unit 11, Level 3	1	27.3	Melted, flat
Unit 11, Level 4, Feature 1	2	8.3	1.4 mm and 0.3 mm thick, respectively; both are flat

Table 12. Unidentified Iron/Steel.

Provenience	Category	No. of Specimens	Weight (gm)	Measurements (Length x Width x Thickness)mm	Comments
Surface	Flat	1	NA	114.3 x 26.0 x 2.0	Rectangular strip
Surface	Flat	1	NA	75.0 x 50.0 x 3.0	
Unit 3, Level 3/4, Area 1	Flat	10		1.0 mm thick	No intact edges
Unit 4, Level 3/4	Flat	22	61.2	1.0 mm thick	No intact edges
Unit 6, Level 4	Other	3	NA	see description p.	See description p.
Unit 8, Level 1	Flat	1	198.0	10.0 mm thick	Heat-fractured; no intact edges
Unit 8, Level 3	Flat	1	25.7	3.0 mm thick	No intact edges
Unit 9, Level 3	Flat	2	4.1	1.0 mm thick	No intact edges
Unit 9, Level 3	Flat	1	5.9	5.0 mm thick	No intact edges
Unit 9, Level 3	Circular	1	7.6	8.0 mm diameter	Solid bar
Unit 9, Level 4	Flat	1	NA	11.0 mm thick	Heat-fractured; no intact edges
Unit 9, Level 4	Rust Lump	4	2.5		Amorphous lumps
Unit 9, Level 4, Feature 1	Flat	1	NA	76.0 x 75.0 x 2.0 mm	Square shape; rectangular cross section
Unit 9, Level 4, Feature 1	Rust Lump	2	1.8		Amorphous lumps
Unit 10, Level 4	Rust Lump	1	5.2		Amorphous lump
Unit 10, Level 4, Feature 9	Rust Lump	3	3.9		Amorphous lumps
Unit 11, Level 3	Other	1	NA	see description	See description
Unit 11, Level 4, Feature 1	Flat	1	2.1	2.0 mm thick	No intact edges
Unit 11, Level 4, Feature 1	Flat	1	11.8	6.0 mm thick	No intact edges
Unit 12, Level 4	Flat	1	0.3	1.0 mm thick	No intact edges
Unit 13, Level 4	Flat	1	2.9	1.0 mm thick	No intact edges
Unit 14, Level 4	Rust Lump	2	10.0		Flat lumps
Unit 14, Level 4, Feature 1, Subfeature 1	Flat	1	NA	81.0 x 12.0 x 1.0 mm	Flat strip; rectangular cross section
Unit 14, Level 4, Feature 1	Rust Lump	1	10.7		Amorphous lump
Unit 15, Level 2	Flat	5	4.1	1.0 mm thick	No intact edges
Unit 17, Level 4	Rust Lump	1	18.1		Amorphous lump
Unit 17, Level 4, Area 2	Rust Lump	1	1.5		Amorphous lump
Unit 18, Level 4	Rust Lump	3	11.3		Amorphous lump
Unit 18, Level 4, Area 1	Rust Lump	16	63.0		Amorphous lumps
Unit 19, Level 3	Flat	1	NA	1.0 mm thick	Right angle edge present

Table 12. Continued.

Provenience	Category	No. of Specimens	Weight (gm)	Measurements		Comments
				(Length x Width x Thickness)mm		
Unit 19, Level 4	Flat	5	242.2	11.0 mm thick		Heat-fractured; no intact edges
Unit 19, Level 4	Flat	5	6.0	1.0 mm thick		No intact edges
Unit 19, Level 4	Melted	5	22.3			Amorphous lumps
Unit 19, Level 4, Area 1	Rust Lump	1	2.2			Amorphous lump
Unit 20, Level 4, Area 2	Flat	12	643.1	Varies between 8.1 mm and 13.0 mm thick		Heat-fractured; no intact edges; very heavily corroded
Unit 21, Level 4, Area 1	Flat	3	188.6	8.0 mm thick		Heat-fractured; no intact edges
Unit 21, Level 4, Area 2	Flat	4	138.4	11.0 mm thick		Heat-fractured; no intact edges
Unit 22, Level 2	Flat	1	143.1	11.0 mm thick		Heat-fractured; no intact edges
Unit 22, Level 3	Flat	3	2.0	2.0 mm thick		No intact edges
Unit 22, Level 3	Flat	1	7.0	5.0 mm thick		No intact edges
Unit 22, Level 3	Flat	1	NA	6.0 mm thick		No intact edges
Unit 22, Level 3	Rust Lump	2	5.7			Amorphous lumps
Unit 22, Level 4	Flat	6	34.5	1.0 mm thick		No intact edges
Unit 22, Level 4	Rust Lump	4	19.4			Amorphous lumps
Unit 23, Level 2	Flat	1	168.6	11.0 mm thick		Heat-fractured; no intact edges
Unit 23, Level 2	Melted	1	18.4			Amorphous lump
Unit 24, Level 2	Flat	3	3.8	1.0 mm thick		No intact edges
Unit 25, Level 4	Rust Lump	1	8.2			Amorphous lump
Unit 25, Level 4, Feature 9	Flat	111	345.0	1.0 mm thick		No intact edges
Unit 25, Level 4, Feature 9	Flat	3	57.2	4.0 mm thick		No intact edges
Unit 25, Level 4, Feature 9	Flat	1	27.8	5.0 mm thick; 16.0 mm wide		Only sides intact
Unit 25, Level 4, Feature 9	Flat	1	46.7	36.0 x 16.0 x 14.0 mm		Rectangular block; rectangular cross section
Unit 25, Level 4, Feature 9	Rust Lump	44	196.3			Amorphous lumps
Unit 26, Level 2	Flat	1	149.5	11.0 mm thick		Heat-fractured; no intact edges
Unit 26, Level 3	Flat	1	1.7	2.0 mm thick		No intact edges

Table 12. Continued.

Provenience	Category	No. of Specimens	Weight (gm)	Measurements		Comments
				(Length x Width x Thickness)mm		
Unit 26, Level 3	Flat	1	54.0	11.0 mm thick		Heat-fractured; no intact edges
Unit 26, Level 4	Flat	12	7.5	1.0 mm thick		No intact edges
Unit 26, Level 4	Flat	2	2.7	2.0 mm thick		No intact edges
Unit 26, Level 4	Flat	1	42.9	11.0 mm thick		Heat-fractured; no intact edges
Unit 26, Level 4	Rust Lump	6	32.7			Possibly flat; heavily corroded
Unit 26, Level 4, Area 6	Flat	31	241.7	1.0 mm thick		No intact edges; associated with flat pieces exhibiting a simple folded over seam--possibly fragments from a nonround container
Unit 26, Level 4, Area 6	Rust Lump	2	9.1			Amorphous lumps
Unit 27, Level 3	Flat	1	NA	103.2 x 8.0 x 10.0 mm		Rectangular strip; rectangular cross section
Unit 27, Level 3	Circular	1	209.5	80 mm diameter; 22.2 mm thick		Fragment of an unidentified circular object
Unit 27, Level 4, Feature 1	Flat	2	0.9	1.0 mm thick		No intact edges
Unit 27, Level 4, Feature 1	Rust Lump	8	11.5			Amorphous lumps

NA = Not Applicable

consistent with the thickness of such items as cans. Since all of these specimens lack any intact edges, it is impossible to definitively identify their origin. However, they may reflect container fragments (cans) in addition to thin sheet metal (raw material). These rather thin pieces of metal were scattered across the site with no distinct clustering other than that a high proportion were recovered from Feature 9.

The second distinct clustering by thickness occurs around 11 mm. All of these pieces are characterized by heat fracturing and a rectangular cross section. Although this cluster of flat pieces is widely distributed, the specimens do tend to cluster along the western edge of the structure near the junction of the brick and wooden sections of the structure's foundation. Exact identification of the function of these pieces is unclear, but they do not appear to have been raw material, and in fact may have been related to the forging operations carried out at the site.

Two specimens represent circular, unidentified iron/steel. This group includes a fragment of a solid bar 8 mm in diameter. This specimen is heavily corroded, which prohibits any attempt at identification. The second specimen is a small fragment of a circular object with an approximate 80 mm diameter. It is hollow with a wall thickness of 22.2 mm. Because of the specimen's small size, functional identification was not possible.

Rust lumps are self-explanatory. They consist of small pieces of metal that have corroded to an amorphous lump, generally lacking even a core of uncorroded metal.

Melted pieces consist of small fragments that have melted to an unrecognizable form. They are neither slag nor other by-products of the forging process. These pieces also tend to be heavily corroded.

The "other" category consists of those few pieces that did not conform to any of the above categories and that could not be identified as either miscellaneous unidentified machine parts or tools. The four specimens in this category represent two morphologically different items. The first consists of one whole and two fragmentary arced, semicircular pieces. They are small, measuring 20 mm long, 3 mm wide, and a maximum of 6 mm thick. The distal end tapers to a point on the dorsal and ventral surfaces, while the proximal end has a small flange, presumably for attachment purposes. Morphologically, these pieces vaguely resemble the claw of a small hammer; functionally, they are an enigma. The second enigmatic specimen is a flat truncated triangular piece that curves slightly at the apex of the triangle. It measures 44 mm long, 18 mm wide at the base, and 5 mm thick.

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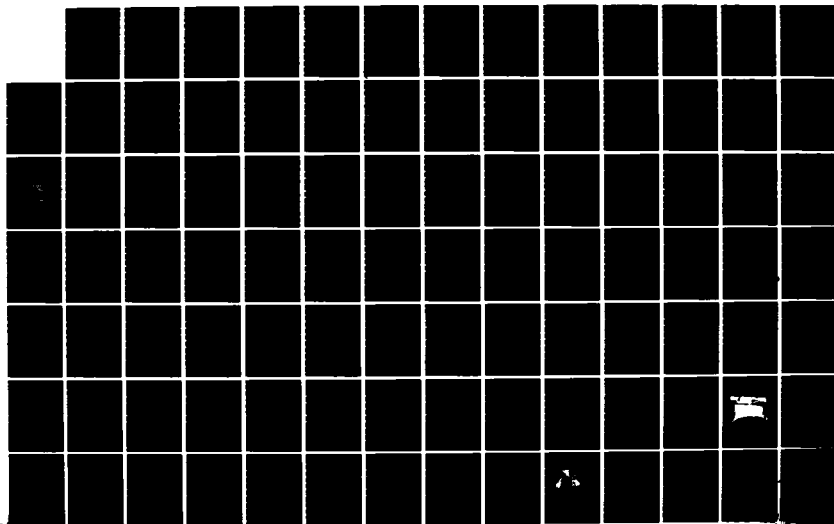
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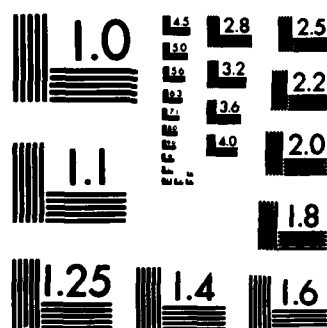
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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A



D. Lead

A total of 828 pieces of unidentified lead accounts for 25.11% of the total metal assemblage. All of the specimens were melted to various degrees and the vast majority were completely melted into amorphous blobs. Several, however, were not entirely melted. Two specimens, one from Unit 19, Level 4, Area 1 and one from Unit 22, Level 3, displayed small portions of coarse threading. They were too badly distorted to determine whether or not they were pieces of pipe tubing. A specimen from Unit 22, Level 4 consists of a partially melted solid circular plug 36 mm long and 18 mm in diameter. All of the unidentified lead was quantified by weight and listed in Table 13.

The melted unidentified lead appeared throughout the site in a variety of contexts although it occurred most frequently in Units 19, 22, and 26. These units straddle the southern end of the structure's wooden section. South of this area, melted lead only occurred in low frequencies scattered throughout the general midden of the site. Frequency of occurrence was even lower east of the E12 line (i.e., east of Feature 1). North of Units 19, 22, and 26, the occurrence of melted lead drops off markedly except in Feature 9, which yielded 216 pieces (26% of the total).

E. Tin

Three unidentified pieces of tin account for 0.09% of the total metal assemblage. All three pieces are flat fragments 2 mm thick and none displays an intact edge. Two were recovered from Level 2 of Unit 27 and weigh 25.2 gm, and the third piece weighs 3 gm and was recovered from Level 3 of Unit 27.

F. Pewter

A single small melted lump of pewter weighing 2.6 gm was recovered from Unit 4, Level 3/4 and accounts for 0.03% of the metal assemblage. It measures 3 mm in diameter and 3 mm thick. Its source of origin is unknown.

Table 13. Unidentified Lead.

Provenience	No. of Specimens	Weight (gm)
Surface	1	2.1
Unit 3, Level 3/4, Area 2	4	213.6
Unit 4, Surface	1	0.5
Unit 4, Level 3/4	5	112.0
Unit 9, Level 3	2	57.1
Unit 9, Level 4	4	10.7
Unit 9, Level 4, Feature 1	6	20.8
Unit 10, Level 3	6	576.0
Unit 10, Level 4	4	14.1
Unit 10, Level 4, Feature 9	3	6.6
Unit 11, Level 3	1	8.6
Unit 11, Level 4, Feature 1	10	44.0
Unit 13, Level 4, Feature 4	1	45.0
Unit 14, Level 4	1	13.1
Unit 14, Level 4, Feature 1, Subfeature 1	3	20.2
Unit 15, Level 2	3	4.6
Unit 15, Level 3	11	44.9
Unit 18, Level 3	1	52.7
Unit 18, Level 4	3	38.1
Unit 18, Level 4, Area 1	5	24.0
Unit 18, Level 4, Area 4	4	8.0
Unit 19, Level 3	12	65.5
Unit 19, Level 4	67	303.3
Unit 19, Level 4, Feature 10	27	108.9
Unit 19, Level 4, Area 1	96	371.7
Unit 19, Level 4, Area 2	1	1.8
Unit 19, Level 4, Area 4	5	10.1
Unit 20, Level 4, Area 2	2	12.2
Unit 21, Level 2	1	19.7
Unit 21, Level 4	1	3.5
Unit 21, Level 4, Area 2	7	96.3
Unit 22, Level 2	4	29.1
Unit 22, Level 3	36	159.0
Unit 22, Level 4	187	896.9
Unit 25, Level 4, Feature 9	216	1065.0
Unit 26, Level 3	8	49.5
Unit 26, Level 4	27	79.5
Unit 26, Level 4, Feature 10	6	14.0
Unit 26, Level 4, Area 1	23	60.2
Unit 26, Level 4, Area 4	10	17.7
Unit 26, Level 4, Area 6	10	79.1
Unit 27, Level 4, Feature 1	3	11.3

## FAUNAL ASSEMBLAGE

(Prepared by Terrance J. Martin and M.J. Hambacher)

Thirty-one animal remains, 8 bone and 23 shell fragments, account for 0.5% of the total artifact assemblage. Included is a single left scapula of an immature opossum (Didelphis marsupialis) weighing 1.1 gm. Domestic cattle (Bos cf. taurus) is represented by a single molar or premolar (8.7 gm) recovered in situ from Level 4 on Unit 19 on the interior of the structure. An additional six unidentified mammal bones were recovered from in situ cultural deposits within the cotton gin. Five of these fragments (1.1 gm) were recovered from the fill of Feature 9 in Unit 25, and the remaining fragment (0.1 gm) was burned and originated from Level 4 of Unit 9 on the northwestern corner of the structure. All of the bone is unmodified.

Thirteen large, thick pieces of burned shell (44.4 gm) were recovered from cultural deposits in level 4 of Unit 12. Six additional fragments (39.1 gm) of shell were recovered in the brick rubble (Feature 5) overlying Feature 7; four of these fragments were burned. These four fragments were recovered from Level 3/4 in Unit 4, which straddles Feature 1--North Wall. The chalky appearance and texture of these shells indicate they were obtained from an ancient geological deposit and not from living mollusks. They may be fragments of Gryphea, a Mesozoic era oyster that is prolific in the bentonite beds in the area. In the immediate vicinity of the site, the bentonite is exposed only in the bluffs near the Barton and Vinton townsites, indicating that these fossils were transported to the site.

#### PLASTIC ASSEMBLAGE

A single fragment of a crushed, translucent, white, plastic milk jug was recovered from Unit 11, Level 2, a disturbed context, and accounts for 0.03% of the total artifact assemblage. The jug appears to have had a one-quart capacity. It is not associated with the nineteenth century utilization of the site.

## MINERAL/COMPOSITE/MISCELLANEOUS ASSEMBLAGE

A total of 211 mineral, composite, or miscellaneous pieces were recovered from the site and account for 3.3% of the total artifact assemblage. This category encompasses a wide variety of material, including charcoal, coal, cinder, limestone, mortar, slag, and clay.

### I. Charcoal

Except for Level 5, charcoal was present in every stratum, feature, and area of the site, generally occurring as small to moderate sized flecking scattered throughout the soil. Charcoal was particularly prevalent in the northern half of the structure, which apparently consisted of wood. Table 14 lists the charcoal that was saved.

### II. Coal

A single small piece of bituminous coal recovered from Unit 10, Level 3 weighs 2.3 gm and accounts for 0.5% of this category.

### III. Cinder

Seventy-seven pieces (5,225.5 gm) of cinder account for 36.5% of the mineral/composite/miscellaneous category. Most of the cinder, 5,029.8 gm (17 pieces) or 96.3%, was recovered from Feature 9. Another concentration of cinder occurred in Unit 18 and yielded 137.1 gm of cinder (53 pieces), or 2.6% of the total weight. A total of 28 gm was recovered from Level 3, 33.7 gm from Level 4, 16.3 gm from Area 2 in Level 4, and 59.1 gm in the oval burned zone designated as Feature 16. The remaining cinder was diffusely scattered across Units 19, 21, 22, 26, and 27.

### IV. Limestone

A total of 109 pieces of limestone weighing 1,609.45 gm and accounting for 51.7% of the mineral/composite/miscellaneous assemblage was recovered. The limestone generally consisted of small pieces between 3 cm and 8 cm in diameter and was diffusely spread throughout the southern three quarters of the structure. Feature 5 contained the largest concentration of limestone, yielding 664.0 gm (36 pieces) or 41.3% of the total. Likewise, Feature 7 yielded 146.4 gm (5 pieces), or 9.1% of the total. A minor amount of limestone, 59 gm, was recovered from the burned zone in Unit 18 and the surrounding area.

### V. Mortar

Together, the four pieces of lime-based mortar recovered from the site weigh 664.9 gm and account for 1.9% of the mineral/composite/miscellaneous assemblage. The mortar in this sample was recovered from Unit 5, Level 2 and Unit 22, Level 4. Traces of mortar were also encountered between horizontal courses of brick, although it was generally too diffuse for collection.

Table 14. Charcoal from 22Lo741.

Provenience	Weight (gm)
Unit 3, Level 4, Area 2	0.5
Unit 4, Level 3/4	0.9
Unit 6, Level 2	2.7
Unit 9, Level 4, Feature 1	135.0
Unit 10, Level 3	2.0
Unit 11, Level 3	9.0
Unit 11, Level 4, Feature 1	31.8
Unit 12, Level 4	0.5
Unit 13, Level 4	13.9
Unit 16, Level 4, Area 3	99.2
Unit 19, Level 3	0.1
Unit 19, Level 4	46.4
Unit 19, Level 4, Feature 1	11.8
Unit 19, Level 4, Feature 10	29.5
Unit 19, Level 4, Feature 1, Subfeature 1	0.3
Unit 21, Level 2	2.9
Unit 25, Level 4, Feature 9	539.1
Unit 26, Level 4, Area 4	4.9

#### VI. Slag

Eighteen pieces of slag weighting 112.9 gm and accounting for 8.5% of the mineral/composite/miscellaneous assemblage were recovered from the site. Sixteen pieces weighing 32.7 gm (29% of the total) were recovered from Unit 19 in the vicinity of the burned zone (Feature 16). Unit 15, Level 3 yielded a single piece weighing 52.2 gm. The remaining slag was recovered from Unit 8, Level 3. All of the slag is gray and very porous.

#### VII. Clay

Two pieces of clay weighing 30.2 gm were recovered from the site. One burned lump weighing 23.1 gm was recovered from the builder's trench associated with Feature 1 in Unit 14, and the other piece was recovered from Unit 25, Level 3. Together they account for 0.9% of the artifacts in this major group.

## PREHISTORIC ASSEMBLAGE

During the excavation of 22Lo741, excavators discovered a minor prehistoric component. A total of 433 specimens has been coded as prehistoric under the code book format utilized by the Tombigee Historic Townsites Project. While these artifacts account for 6.8% of the total assemblage from the site, this figure is somewhat misleading. As will be demonstrated below, much of the prehistoric assemblage cannot be positively associated with the site. Since the prehistoric materials represent a minor component at the site, the discussion of the full significance and distribution of the remains is deferred to Appendix 4.

### I. Lithics

With 422 specimens, the lithic assemblage composes 97.5% of the prehistoric assemblage. This major group has been divided into three categories: 1) debitage, 2) modified, and 3) fire-cracked rock.

#### A. Debitage

A total of 318 specimens of unutilized debitage accounts for 73.4% of the prehistoric assemblage. The debitage can be divided into three subcategories that reflect various stages of lithic reduction.

First are the primary decortication flakes, which are characteristically large and heavy and retain cortex over a minimum of 75% of one surface (White et al. 1963; Brose et al. 1978; Hambacher 1982). Primary decortication flakes represent the initial stage in the reduction of a chert cobble to a usable tool. Thirty-six primary decortication flakes were recovered from the site and account for 11.3% of the lithic debitage. Of these, 29 were heat-treated Tuscaloosa gravel, one was nonheat-treated Tuscaloosa gravel, five were nonheat-treated Camden chert. Table 15 presents a summary of the distribution of the primary decortication flakes. Briefly, 10 specimens were recovered from disturbed contexts, and the remaining 26 specimens were recovered from the historic midden and associated features. There were no distinct clusters of primary decortication flakes.

Next in the reductive sequence are the secondary decortication flakes, and there are 25 specimens accounting for 7.9% of the lithic debitage in the collection. Characteristically, a maximum of 25% of one surface or edge retains cortical material (White et al. 1963; Brose et al. 1978; Hambacher 1982), secondary decortication flakes tend to be relatively thin and are similar to thinning flakes except for the presence of cortex. Most of the flakes are heat-treated Tuscaloosa gravel (16 specimens). Of the remaining nine specimens, five are nonheat-treated Tuscaloosa gravel, three are heat-treated Camden chert, and one is nonheat-treated Camden chert. Thirteen of the specimens were recovered from disturbed contexts, and the remaining specimens were scattered diffusely in the historic midden and in



Table 15. Primary Decortication Flakes.

Provenience	No. of Specimens	Weight (gm)	Chert Type
Surface	3	10.3	H-TG
Unit 3, Level 3/4, Area 2	1	1.6	H-TG
Unit 5, Level 2	3	3.0	H-TG
Unit 6, Level 2	3	6.0	H-TG
Unit 6, Level 4	1	1.1	H-TG
Unit 9, Level 4	2	2.1	NH-C
Unit 9, Level 4, Feature 9	2	10.7	H-TG
Unit 10, Level 4	1	1.4	H-TG
Unit 10, Level 4, Feature 9	2	6.4	H-TG
Unit 10, Level 4, Area 1	2	1.9	H-TG
Unit 10, Level 4, Area 1	1	2.9	NH-C
Unit 10, Level 4, Area 2	1	1.2	H-TG
Unit 10, Level 4, Area 2	1	1.1	H-C
Unit 10, Level 4, Area 2	1	1.6	NH-C
Unit 18, Level 4, Area 1	3	11.8	H-TG
Unit 18, Level 4, Area 4	1	1.3	NH-TG
Unit 19, Level 4, Feature 10	1	0.8	NH-C
Unit 22, Level 2	1	3.0	H-TG
Unit 22, Level 4	1	6.2	H-TG
Unit 25, Level 3	1	1.5	H-TG
Unit 25, Level 4, Feature 9	3	1.7	H-TG
Unit 26, Level 4, Area 1	1	0.2	H-TG

H-TG Heat-treated Tuscaloosa gravel  
 NH-TG Nonheat-treated Tuscaloosa gravel  
 H-C Heat-treated Camden chert  
 NH-C Nonheat-treated Camden chert

Feature 9. Table 16 summarizes the secondary decortication flakes.

Thinning flakes comprise the third subcategory. These are thin flakes removed in the process of thinning incomplete tools to their finished form. A total of 257 specimens account for 80.8% of the lithic debitage and of these, 186 are heat-treated Tuscaloosa gravel, 38 are nonheat-treated Tuscaloosa gravel, 28 are heat-treated Camden chert, one is nonheat-treated Camden chert, and four are exotic or nonlocal cherts. There are two varieties of exotic chert: one is a fine-grained translucent yellowish brown chert, and the other is a fine-grained opaque gray to dark gray chert. These specimens are related to the Fort Payne chert type (Ensor 1981:10-11). Fifty-four of the specimens were recovered from the historic midden and associated features. There were no distinct clusters of thinning flakes at the site (Table 17).

The above stages in the reductive sequence conform to the definitions used by Ensor (1981:119-120).

#### B. Modified

Twenty-one modified pieces of chert compose 4.8% of the prehistoric assemblage. These specimens have been divided into several groups.

##### 1. Utilized Debitage

Four pieces of utilized debitage account for 19% of the modified lithics. One specimen (2.2 gm) is a secondary decortication flake of heat-treated Tuscaloosa gravel recovered from Unit 21, Level 4, Area 1. The remaining three specimens are thinning flakes, also of heat-treated Tuscaloosa gravel. Two specimens (6 gm) were recovered from the surface while the third specimen (2.8 gm) came from Unit 9, Level 4, Feature 9. Small amounts of unifacial use-wear along one edge characterize all of the utilized flakes.

##### 2. Core

Recovered from Unit 9, Level 4, Feature 9, a single fragmentary core accounts for 4.8% of the modified lithics. It is too small to determine its shape although the cross section appears to have been wedge shaped. It was manufactured from heat-treated Tuscaloosa gravel. Table 18 provides the fragment's measurements.

##### 3. Roughout.

Three roughout fragments account for 15.3% of the modified lithics. The roughouts are crudely percussion-flaked cobbles retaining cortex on one or both surfaces; the cortical material tends to be restricted to the medial portions of the tool. Only one specimen was recovered from an in situ cultural deposit (Table 18).

##### 4. Incomplete Biface

Three incomplete bifaces account for 14.3% of the modified lithics (Table 18). These specimens are char-

Table 16. Secondary Decortication Flakes.

Provenience	No. of Specimens	Weight (gm)	Chert Type
Surface	3	5.3	H-TG
Surface	2	1.2	H-C
Unit 6, Level 2	2	3.2	H-TG
Unit 6, Level 4	1	2.4	H-TG
Unit 7, Level 2	1	3.9	H-TG
Unit 8, Level 1	1	0.7	H-TG
Unit 9, Level 3	2	2.9	H-TG
Unit 9, Level 4, Feature 9	1	0.7	NH-C
Unit 10, Level 4, Area 1	3	3.1	NH-TG
Unit 10, Level 4, Area 2	1	0.7	NH-TG
Unit 11, Level 2	1	1.4	H-TG
Unit 18, Level 4, Area 1	2	2.2	H-TG
Unit 22, Level 2	1	0.7	H-TG
Unit 23, Level 2	1	1.6	H-TG
Unit 25, Level 4, Feature 9	1	0.3	H-TG
Unit 25, Level 4, Feature 9	1	1.0	NH-TG
Unit 28, Level 2	1	3.2	H-C

H-TG Heat-treated Tuscaloosa gravel  
 NH-TG Nonheat-treated Tuscaloosa gravel  
 H-C Heat-treated Camden chert  
 NH-C Nonheat-treated Camden chert

Table 17. Thinning Flakes.

Provenience	No. of Specimens	Weight (gm)	Chert Type
Surface	14	17.8	H-TG
Surface	6	6.4	H-C
Unit 3, Level 3/4, Area 2	1	0.5	H-TG
Unit 4, Level 3/4	1	5.1	H-TG
Unit 5, Level 2	11	4.8	H-TG
Unit 5, Level 2	1	1.6	NH-TG
Unit 5, Level 3	3	2.0	H-TG
Unit 6, Level 2	6	3.1	H-TG
Unit 6, Level 2	1	0.9	H-C
Unit 6, Level 4	1	2.2	H-C
Unit 7, Level 2	2	2.6	H-TG
Unit 7, Level 2	2	2.9	NH-TG
Unit 7, Level 2	2	1.1	H-C
Unit 8, Level 2	1	0.2	H-C
Unit 8, Level 4, Feature 3 (disturbed)	1	1.2	H-TG
Unit 9, Level 3	1	0.6	exotic
Unit 9, Level 4	2	0.4	H-TG
Unit 9, Level 4	1	0.5	exotic
Unit 9, Level 4, Feature 1	1	0.2	H-TG
Unit 9, Level 4, Feature 9	4	0.7	H-TG
Unit 9, Level 4, Feature 9	2	0.8	H-C
Unit 10, Level 4	5	1.9	H-TG
Unit 10, Level 4, Feature 9	2	0.7	NH-TG
Unit 10, Level 4, Feature 9	2	2.9	H-TG
Unit 10, Level 4, Area 1	9	7.6	H-TG
Unit 10, Level 4, Area 1	2	0.8	NH-TG
Unit 10, Level 4, Area 2	1	1.6	H-C
Unit 10, Level 4, Area 2	1	1.1	NH-TG
Unit 10, Level 4, Area 2	4	0.9	H-TG
Unit 11, Level 2	1	5.3	H-TG
Unit 12, Level 4	3	3.0	H-TG
Unit 12, Level 4, Feature 5	2	1.1	H-TG
Unit 12, Level 4, Feature 5	1	0.1	exotic
Unit 13, Level 4, Feature 4	1	2.3	H-TG
Unit 14, Level 4, Feature 1, Subfeature 1	1	0.3	NH-TG
Unit 15, Level 2	1	1.1	H-TG
Unit 15, Level 3	1	0.2	H-TG
Unit 18, Level 2	1	0.7	H-C
Unit 18, Level 4	2	0.8	H-TG
Unit 18, Level 4, Area 1	19	5.8	H-TG
Unit 18, Level 4, Area 1	4	1.7	H-C
Unit 18, Level 4, Area 3	1	1.2	NH-TG
Unit 18, Level 4, Area 4	3	1.0	H-C
Unit 18, Level 4, Area 4	6	2.3	H-TG

Provenience	No. of Specimens	Weight (gm)	Chert Type
Unit 18, Level 4, Area 4	1	0.3	exotic
Unit 19, Level 4	4	2.3	H-TG
Unit 19, Level 4	1	0.5	NH-TG
Unit 19, Level 4, Area 1	23	6.4	H-TG
Unit 19, Level 4, Area 1	15	7.6	NH-TG
Unit 19, Level 4, Area 4	3	0.8	NH-TG
Unit 19, Level 4, Area 4	15	7.2	H-TG
Unit 20, Level 4, Area 2	1	0.6	NH-C
Unit 21, Level 4, Area 1	1	2.1	H-C
Unit 21, Level 4, Area 2	1	0.1	H-C
Unit 22, Level 2	3	0.8	H-TG
Unit 22, Level 2	2	1.8	H-C
Unit 22, Level 3	2	0.7	H-TG
Unit 22, Level 4	2	0.8	H-TG
Unit 22, Level 4	2	1.0	H-C
Unit 23, Level 4	2	4.4	H-TG
Unit 25, Level 3	2	2.9	H-TG
Unit 25, Level 4, Feature 9	29	23.0	H-TG
Unit 25, Level 4, Feature 9	9	8.5	NH-TG
Unit 26, Level 4, Area 1	1	0.3	H-TG
Unit 26, Level 4, Area 4	1	0.3	H-TG

H-TG Heat-treated Tuscaloosa gravel  
 NH-TG Nonheat-treated Tuscaloosa gravel  
 H-C Heat-treated Camden chert  
 NH-C Nonheat-treated Camden chert

Table 18. Modified Lithic Measurements.

Tool Type	Specimen No.	Provenience	Length (mm)	Width (mm)	Thickness (mm)	Weight (gm)	Shape	Cross Section	Manufacture	Comments
Core	1	Unit 9, Level 4, Feature 9	(59.6)	(39.0)	(20.0)	30.7	Indeterminate	Wedge	HT-TG	
Roughout	2	Surface	(51.1)	40.0	19.2	44.3	Subrectangular	Triangular	NHT-TG	
Roughout	3	Surface	(54.0)	42.9	18.2	31.9	Indeterminate	Wedge	HT-TG	
Roughout	4	Unit 18, Level 4, Area 4	(39.0)	(38.6)	19.8	21.7	Rectangular ?	Trapezoidal	HT-TG	
Incomplete biface	5	Surface	(49.6)	(41.1)	(14.5)	17.2	Indeterminate	Plano-convex	HT-TG	
Incomplete biface	6	Surface	(31.4)	32.0	10.8	9.1	Subrectangular	Biconvex	HT-C	
Incomplete biface	7	Unit 12, Level 4, Feature 5	68.0	29.5	18.0	28.8	Rectangular	Triangular	NHT-TG	
Biface	8	Surface	(43.5)	29.7	13.8	14.7	Triangular	Plano-convex	HT-C	Medial section of a possible drill
Biface	9	Surface	(39.1)	21.2	12.0	9.5	Indeterminate	Biconvex	HT-TG	
Biface	10	Surface	(26.1)	(20.0)	5.0	2.7	Indeterminate	Biconvex	exotic	Tip fragment--possible knife
Biface	11	Surface	(49.9)	(29.0)	11.4	13.6	Leaf	Biconvex	exotic	
Biface	12	Unit 13, Level 4	(17.2)	16.5	18.6	2.6	Indeterminate	Biconvex	HT-C	Probable stem fragment
Biface	13	Unit 18, Level 4, Area 4	(9.6)	(11.5)	(6.0)	0.5	Indeterminate	Biconvex	HT-C	Small tip fragment
Biface	14	Unit 19, Level 4, Feature 10	(30.0)	(13.6)	(17.8)	2.7	Indeterminate	Biconvex	HT-TG	Tip fragment
Biface	15	Unit 19, Level 4, Feature 10, Sub-feature 1	(38.5)	16.7	9.7	5.1	Rectangular	Biconvex	HT-TG	Possible knife

( ) Denotes fragmentary measurement  
HT-TG Heat-treated Tuscaloosa gravel  
NHT-TG Nonheat-treated Tuscaloosa gravel  
HT-C Heat-treated Camden chert

acterized by relatively thick cross sections and crude percussion flaking. In addition, none of the specimens exhibits any macroscopic evidence of use-wear. Only one specimen was recovered from an in situ cultural deposit; the other two were recovered from the surface. These tools have been classified as incomplete because they do not display any use-wear when viewed under a 10x magnifying lens.

#### 5. Biface

Eight fragmentary finished bifaces were recovered from various contexts at 22Lo741. Together, they account for 38.1% of the modified lithics. These tools exhibit a great deal of variation. Only two specimens, both recovered from the surface, can be considered a classic biface in the sense that it functioned as a generalized plant and/or animal processing tool. One (Specimen 8) was of heat-treated Camden chert while the other (Specimen 11) was manufactured from an exotic, nonlocal chert. The chert is a fine-grained light gray with small, off-white specks. This chert most closely resembles Fort Payne chert as defined by Ensor (1981:10).

Specimen 9 is a medial section, possibly from a drill. The lateral edges display a moderate amount of rounding and polishing that is characteristic of drills. It was percussion-flaked and manufactured from heat-treated Tuscaloosa gravel.

Specimen 10 is a small tip or distal end fragment with asymmetrically excurvate lateral edges that exhibit fine pressure flaking. It was manufactured from a fine-grained, off-white chert with a light brown mottling. This specimen does not clearly fit the description of Fort Payne chert and is classified as other exotic chert under Ensor's (1981:9-11) scheme. On the basis of morphology, this specimen is hypothesized to have functioned as a knife.

Specimen 12 is probably a stem fragment from a knife or projectile point. The lateral edges are parallel, the proximal end is straight, and all three sides are slightly ground. It was pressure-flaked and manufactured from heat-treated Tuscaloosa gravel.

Specimen 13 is another distal end fragment with asymmetrically excurvate lateral edges. One lateral edge exhibits fine bifacial pressure flaking while the opposite edge displays large bifacial percussion flaking. It was manufactured from heat-treated Camden chert. On the basis of morphology, this specimen is hypothesized to have functioned as a knife.

Specimen 14 is the distal end of a biface of unknown function. It exhibits straight lateral edges that come to a point. The tool was finely percussion-flaked on both surfaces and manufactured from heat-treated Tuscaloosa gravel.

Specimen 15 appears to be the blunted distal end of a knife. The lateral edges are asymmetrical, with one side straight and the opposite side slightly excurvate. The distal portion of the excurvate side and the distal end of the tool exhibit bifacial use-wear in the form of rounding and attrition flakes. The specimen was percussion-flaked and manufactured from heat-treated Tuscaloosa gravel.

#### 6. Projectile Point

Two fragmentary projectile points account for 9.5% of the modified lithics.

The first specimen is an untyped contracting stem projectile point weighing 14.9 gm. The blade is broken and measures 55 mm long (fragmentary measurement), 25.2 mm maximum width (base of blade), and 12.3 mm maximum thickness (center of blade base). The blade is triangular in shape and biconvex in cross section. Lateral edges are straight with tapered shoulders. The stem has contracting sides with a rounded base. It is not ground and measures 9.1 mm long, 16 mm wide at the distal end, 11 mm wide at the proximal end, and has a maximum thickness of 10 mm. It is percussion flaked and was manufactured from Tuscaloosa gravel. The specimen weighs 14.9 gm.

The second specimen is a triangular Madison (Hamilton) point (Lewis 1955) weighing 1.4 gm. Shaped like an isosceles triangle measuring 16.7 mm long (fragmentary measurement), 19.7 mm across the base, and 3.5 mm maximum thickness, it has a thin biconvex cross section and the lateral edges and the base are straight. The specimen was pressure-flaked and manufactured from heat-treated Tuscaloosa gravel.

#### C. Firecracked Rock

The 83 specimens of prehistoric firecracked rock cannot be considered truly prehistoric. All of the specimens were recovered either from recently disturbed contexts or from the historic midden, and approximately 52% were recovered either from the surface or from Level 2. Considering that a burning heap for the disposal of cleared trees was located immediately above the site on top of the terrace, these specimens can be considered of very recent historic origin. Twenty-nine percent were recovered from Level 3 and appear to be either natural thermally fractured rocks or of recent origin, and the remaining 19% were recovered from the historic midden and associated historic features. These also



appear to be of historic origin owing to the fact that the structure had burned down. The firecracked rock accounts for 19.2% of the lithic material recovered from 22Lo741.

## II. Ceramics

Eleven prehistoric ceramic body sherds were recovered from 22Lo741. Based on their morphological characteristics, these specimens represent three different ceramic types. The major discriminating morphological characteristics were temper type and mode of decoration or the lack thereof. Together, the ceramics account for 2.5% of the prehistoric component at 22Lo741. Table 19 summarizes the provenience, frequency, and weights of the ceramic sherds.

A. Alexander Pinched var. Prairie Farms (Ford and Quimby 1945; Jenkins 1981).

A single decorated sand-tempered body sherd was recovered from the surface of 22Lo741 and represents a single vessel. Although the surface of the sherd is partially eroded, it appears to be decorated with a linear series of short arc shaped punctates or pinchings made with the fingernail. The sherd is tempered with medium-grained sand, exhibits a granular yellowish brown paste, and measures 5 mm in thickness.

B. Mulberry Creek Plain var. Dead River (Jenkins 1981).

Two undecorated limestone-tempered body sherds represent a single vessel and exhibit a dark, almost black uniform paste. The exterior of both sherds appears to have been burnished. The sherds range between 4 mm and 7 mm in thickness.

C. Baldwin Plain var. Blubber (Jenkins 1981).

There are eight undecorated body sherds in the collection, all heavily weathered and in poor condition. Representing a minimum of one vessel, all eight sherds are tempered with fine- to medium-grained sand. The size of the tempering agent is the primary discriminator between Baldwin Plain var. Blubber and its coarse grained counterpart Baldwin Plain var. Lubbub (Jenkins 1981:123). The paste is granular and uniform in color, tending to be yellowish brown to buff-colored. The sherds range between 4 mm and 7 mm in thickness.

Table 19. Prehistoric Ceramics.

Provenience	Type	No. of Specimens	Weight (gm)
Surface	Alexander Pinched var. Priarie Farms	1	5.3
Unit 6, Level 4	Mulberry Creek Plain var. Dead River	1	7.6
Unit 13, Level 4	Baldwin Plain var. Blubber	1	3.1
Unit 19, Level 4, Feature 10 Subfeature 1	Baldwin Plain var. Blubber	6	14.3
Unit 21, Level 2	Mulberry Creek Plain var. Dead River	1	55.9
Unit 21, Level 4, Area 2	Baldwin Plain var. Blubber	1	4.0

## INTERNAL CORRELATIONS

This section has been divided into two sections dealing with the historic period utilization of the site. The first section discusses the temporal placement of the site while the second deals with the functional identification of the site. A full summary and discussion of the small prehistoric component at 22Lo741 is presented in Appendix 4.

### Chronology

The temporal placement of the structure excavated at 22Lo741 relies on both the documentary evidence provided by deeds and the artifact assemblage from the site. Each of these sources contributes to the dating of the site in a different but complementary manner. As the documentary evidence has already been discussed, this section will concentrate on the dating of the diagnostic artifacts from the site. Diagnostic artifacts were relatively rare at the site. Most of the datable artifacts can only be generally placed in a nineteenth century context. But there were a few artifacts that are crucial to the archaeological dating of the site. These are divided into three gross categories based on the material of manufacture: glass, ceramic, and metal. Each will be discussed separately, followed by summary statements drawing the three categories together.

The first sample of glass to be considered is flat window glass. Although utilization of window glass as a dating mechanism is a recent development and its utility is still being explored, Demeter and Lowery (1977:78-82) have drawn together much of what is presently known about this facet of window glass. It appears that there was a general increase in the thickness of window glass through the course of the nineteenth century, and two methods of analysis have been proposed: Walker (1971) proposed that the thickness of the thinnest glass be used, and Grosscup (1968, 1972) suggested the utilization of the modal thickness of the sample. As the shift in thicknesses appears to be gradual, Grosscup's modal method is considered a better estimation.

The window glass from 22Lo741 tended to range mainly between 1.4 mm and 1.7 mm thick. This range contains approximately 70% of the recovered window glass. Window glass with a minimum thickness of 1.2 mm has been assigned to a pre-1845 context, while glass with minimum thickness of 1.6 mm has been assigned to a post-1845 context (Demeter and Lowery 1977:78). The dates are the same when using modal thicknesses. The exact placement of the glass from 22Lo741 is somewhat of a problem because its thicknesses span these two periods, but it has been noted that post-1845 window glass does not fall below 1.6 mm thick (Demeter and Lowery 1977:78). Thus, the glass from 22Lo741 has been assigned to the general period of the late 1830s to the late 1840s.

The glass vessels recovered during the excavation also aid in placing the site within a general time frame. Several different attributes of a bottle are useful as dating mechanisms. With the glass vessel assemblage from 22Lo741, these are restricted to lip/neck types, decorated bottle body fragments (flasks), and kick-ups and pontil scars. Since the vessel glass was quantified by discrete vessels, this becomes the easiest and most convenient manner to discuss its temporal implications.

Three alcoholic beverage (wine) bottle lip/neck fragments and one unidentified bottle-type lip/neck fragment were recovered from the site (Vessels 1, 2, 4, and 5). Vessels 1, 2 (wine bottles), and 4 (unidentified vessel type) all have applied hand-tooled lips, a method of lip formation in use throughout the first half of the nineteenth century. Nonapplied hand-tooled lips replaced applied hand-tooled lips around 1850 to 1860 with the development of an improved method and tool for lip formation (Lorrain 1968:40). The remaining specimen, Vessel 5, a wine bottleneck, is much less useful as a temporal indicator. This vessel has been identified as having been hand-formed, which implies that the vessel was either free-blown or mold-blown with the seam subsequently being removed during the lip formation process. A three-piece mold was introduced ca. 1810 that in turn was replaced by the two-piece mold ca. 1840 (Lorrain 1968:43). Mold seams on the necks of bottles also tended to extend further up the neck as the century progressed. Based on this information, Vessel 5 dates to a pre-1850 context. The only other lip/neck fragment in the collection is Vessel 3, which was recovered from the general surface of the site. It is a machine-made, nonalcoholic beverage bottle. Although machine-made bottles may date as early as 1902 (Lorrain 1968:42; Munsey 1970:33), this specimen appears to be a very recent introduction (ca. 1980) to the site. It is considered unrelated to the nineteenth century utilization of the site.

Of particular importance in the dating of the site are the two fragmentary flasks, Vessels 6 and 7. As described above, Vessel 6 is a Jackson-style historical flask. Historical flasks were produced between ca. 1810 and the 1860s or early 1870s (McKearin and Wilson 1978:440; Munsey 1970:87-89). Those depicting presidential candidates tended to be produced within relatively short time periods and are well dated. Andrew Jackson flasks are considered to have been produced as part of the bitter 1824 and 1828 presidential contests between Andrew Jackson and John Quincy Adams (McKearin and Wilson 1978:475). But the point at which these flasks disappear from the market is unclear. Their production probably continued at least as long as Jackson was in office (1829-1837). Vessel 6 also has been tentatively identified as originating from the glasshouses of the Pittsburgh and Monongahela

district and possibly from the glasshouse of John Taylor and Company of Brownsville, Pennsylvania. This particular firm operated under this name from 1828 to the early 1840s (McKearin and Wilson 1978:476). Furthermore, it is doubtful that flasks of this variety were produced in any quantity after Jackson's death in 1845. So Vessel 6 is placed within the period between 1824 and ca. 1840-1845. The dating of Vessel 7 is much less clear and secure. Vessel 7 has been identified as a cornucopia flask of the GIII-7 or GIII-11 variety (McKearin and Wilson 1978:588-589). Decorative flasks of this type have been attributed to several different northeastern United States glasshouses (McKearin and Wilson 1978:422). These flasks were first produced in the 1820s or 1830s and continued to be produced until at least the middle of the nineteenth century (McKearin and Wilson 1978:422).

The most frequent diagnostic attributes on the glass vessels were kick-ups and pontil scars. Vessels 10-16 displayed these characteristics. Of particular interest here are the alcoholic beverage (wine) bottle bases. Vessels 11-13 all conform to the type of wine bottles produced in the late eighteenth and the early nineteenth centuries. All exhibit kick-ups that have an irregular cone shape in profile and all display a sand-tipped pontil mark. McKearin and Wilson (1978:206-207) place this variety to the period between ca. 1780 and 1830. Vessel 10 did not retain enough of its kick to allow accurate identification for dating purposes. Additionally, all of the vessels except Vessel 11, which was free-blown, appear to have been manufactured in either a dip mold or a three-piece mold. Three-piece molds were first introduced ca. 1810 and were subsequently replaced by the development and spread of the two-piece hinged mold ca. 1840 (Lorrain 1968:38-40).

Vessels 10-13 exhibit sand-tipped pontil marks. Pontil marks were common on bases until the 1850s and 1860s, when the snap case replaced empontilling (Jones 1971:72; Lorrain 1968:40). The internal chronology of the various empontilling methods is confused because use of the methods overlapped. Still, several general statements concerning the dating of pontil marks may be made. The use of the blowpipe as the pontil rod began to decrease around 1845 when an improved empontilling technique was introduced (Munsey 1970:46-48) that entailed the use of a flared iron bar or bare iron pontil. Based on this information, the alcoholic beverage bottle bases have been dated to between 1810 and ca. 1845. The initial date is based on the introduction of the three-piece mold, while the terminal date is based on the presence of sand-tipped pontil marks. Because the production of free-blown bottles continued after the introduction of the three-piece mold, Vessel 11 cannot by itself be used in dating the site. When considered with the other wine bottle bases, however, it can be seen to fall within the first half of the nineteenth century. It must also be remembered that wine is aged in the bottle for varying lengths of time, which introduces an additional time lag between the manufacture of the bottle, its sale, and eventual deposition in an archaeological context.

The remaining three glass vessel bases are much less tightly dated, and one is of dubious association with the historic occupation. Vessel 14 is a dark aquamarine foodstuff jar. Canning in wide-mouthed jars was widespread by the mid-1820s (McKearin and Wilson 1978:246-247) but the classic canning jar, the Mason jar, was not patented until 1858 (Lorrain 1968:43). After this date, canning jars remained fairly uniform in color and shape throughout the rest of the century. The base fragment comprising Vessel 14 is too small to allow a positive identification as to jar type and thus can only be placed generally within the nineteenth century. Vessels 15 and 16 both display glass rod pontil marks and appear to have been manufactured in three-piece molds. Although the glass rod pontil persisted until ca. 1850-1860 (Lorrain 1968:43; Robert C. Sonderman, personal communication), three-piece molds were commonly used between ca. 1810 and ca. 1840-1850 (Lorrain 1968:38-40). This attribute is the most useful for dating Vessels 15 and 16.

The fragmentary inkwell recovered from Feature 9 has been identified as a type manufactured by the Keene (Marlow Street) Glass Works in Keene, New Hampshire. Founded in 1815, the glass works continued to produce a distinct line of glass products until 1841 (Wilson 1972:159). Among these were the inkwells of the GIII-29 variety, the variety present at 22Lo741. Production of these pieces began in 1815 and continued until 1835 (Wilson 1972:165-166).

Vessels 8 and 9 are the remaining datable bottle fragments. Vessel 8 is a single body sherd with a mold seam, which is believed to be an indication of a bottle made in a two-piece mold. If this is indeed so, Vessel 8 would be placed in a post-1840 context. Vessel 9 is a fragment of a modern (ca. 1980) Coca-Cola bottle. In summary, the glass assemblage from 22Lo741 consistently dates to the period between ca. 1820 and 1850-1860, and several specimens date more specifically to the period between the late 1820s and ca. 1845.

Most of the ceramic assemblage from 22Lo741 also dates to the first half of the nineteenth century. The sample of 11 vessels can be reduced to eight by removing those vessel fragments recovered from the general surface that could not be positively associated with sherds recovered from in situ nineteenth century deposits. Vessel 9, a white paste earthenware plate; Vessel 10, a white paste stoneware platter; Vessel 11, a color paste stoneware utilitarian crock; and a single white paste earthenware body sherd can only be broadly placed within the latter two-thirds of the nineteenth century (South 1977:211; Lofstrom 1976:10-11).

One of the most important temporal indicators recovered from the site is a nearly complete "Old Blue" or "Staffordshire Blue" transfer printed pearlware plate, Vessel 4. This plate displays most of an impressed

marker's mark attributed to the firm of William Adams and Sons (Potters) Limited (Godden 1964:21). The pottery of William Adams was located in Tunstall and Stoke, part of the Staffordshire pottery center in England. This firm was established in 1769 and has continued operating to this day. The mark recovered from 22Lo741 is very similar to Godden's mark number 19 (Godden 1964:21), which was utilized on blue printed earthenwares between 1804 and 1840. But there are several discrepancies concerning the mark. First, the specimen recovered from 22Lo741 (Figure 12a) is an impressed rather than a printed mark and secondly, the word arrangement is slightly different from that of the mark illustrated by Godden (1964) and other authors (Chaffers 1946:690; Cushion and Honey 1965). The mark they describe has the word "ADAMS" over the head of the eagle and lacks the word "SEMI CHINA." Despite these discrepancies, Vessel 1 contains a similar mark that also dates between ca. 1804 and 1840.

The characteristics of the plate and its decoration further substantiate the placement of the vessel within this time period. Exhibiting a distinct bluish to slightly greenish cast to the glaze, the vessel is undoubtedly pearlware. By 1800, pearlwares were the predominant ceramic type in America (Lofstrom 1976:3), and transfer printing as a decorative motif, particularly deep cobalt blue designs, was common throughout the duration of pearlware's popularity. Beginning around 1820 to 1830, whiteware, which had a much clearer glaze, replaced pearlware in popularity (Lofstrom 1976:7-8; Noel Hume 1969:130). Although the exact date at which pearlwares completely disappear from the archaeological record is unknown, most historic archaeologists cite a terminal date of between 1830 and 1840 (South 1977:211; W. Lee Minnerly, personal communication).

Three other fragmentary transfer printed vessels are considered associated with the historic utilization of the site. All three are clearly whitewares and exhibit a very white body with colorless puddling in crevices. Two fragmentary plates (one with a partial maker's mark) and five other sherds exhibit brown transfer prints. Transfer prints in colors other than blue made their appearance, along with whitewares, around 1828 (Lofstrom 1976). Shaw (1829:234-235) mentions brown colored transfer prints as being recent introductions. Lofstrom (1976:8-9) has placed the decline and demise of brown transfer prints at ca. 1850. Two highly fragmentary printed maker's marks are also of interest here. Examination of a number of encyclopedic books on maker's marks (Chaffers 1946, 1965; Cushion and Honey 1965; Godden 1964; Kovel and Kovel 1953) failed to identify positively these marks. The mark on Vessel 6 may relate to marks utilized by Minton, a pottery in Stoke,

Staffordshire, that has operated since 1793 (Godden 1964:438-439), but the marks cannot be used for dating purposes.

The only other colored transfer printed whiteware at the site is black (Vessel 7). The date at which black transfer prints were introduced is unclear, although Lofstrom (1976:8-9) places its introduction possibly to the 1830s and certainly no later than 1840. Since black printing was used on both creamwares and pearlwares (Noel Hume 1969:128-129), it seems logical that its use was merely shifted to whitewares when they came into vogue. Black transfer printed whitewares have a terminal date of ca. 1850 (Lofstrom 1976:9).

Also in the collection are a minimum of two underglaze handpainted polychrome white paste earthenware plates. The decorative motif on both vessels has been variously described as Late Gaudy Dutch (Demeter and Lowery 1977:66-67) and as Sprigware (Robert C. Sonderman, personal communication; W. Lee Minnerly, personal communication). Demeter and Lowery (1977:67) date these wares archaeologically to between 1835 and 1850. There is a single vessel of simple banded white paste earthenware, Vessel 1, in the collection. Annular wares were popular on both pearlwares and whitewares throughout the nineteenth century (South 1977:212; Price 1979). Although highly fragmentary, the pipe recovered from Feature 9 appears to be a variety typical for the last third of the eighteenth century on through the first half of the nineteenth century (Noel Hume 1969:303, 307).

The entire ceramic assemblage, even those specimens that are not related to the site, points to a nineteenth century occupation at 22Lo741. Those that can be attributed to the structure indicate an even earlier and more tightly dated occupation. All of these ceramic types date between 1800 and 1860, with most dating between 1830 and 1850. Although the ceramic vessel assemblage was small, it was considered a good candidate for the application of South's mean ceramic dating formula (1972). After removing those vessels of dubious association, the sample was reduced to seven vessels (Table 20), which generated a date of 1839.1. This date is considered to be an underestimate created by the effect of the 1825 median date on Vessel 4, which as noted above may more properly be dated later. The amount of change generated by shifting it to a later date (1840) is small, creating a new date of 1841.3. This may be a more accurate estimate of the median date of occupation.

One final broad category of artifacts, the metal assemblage, offers



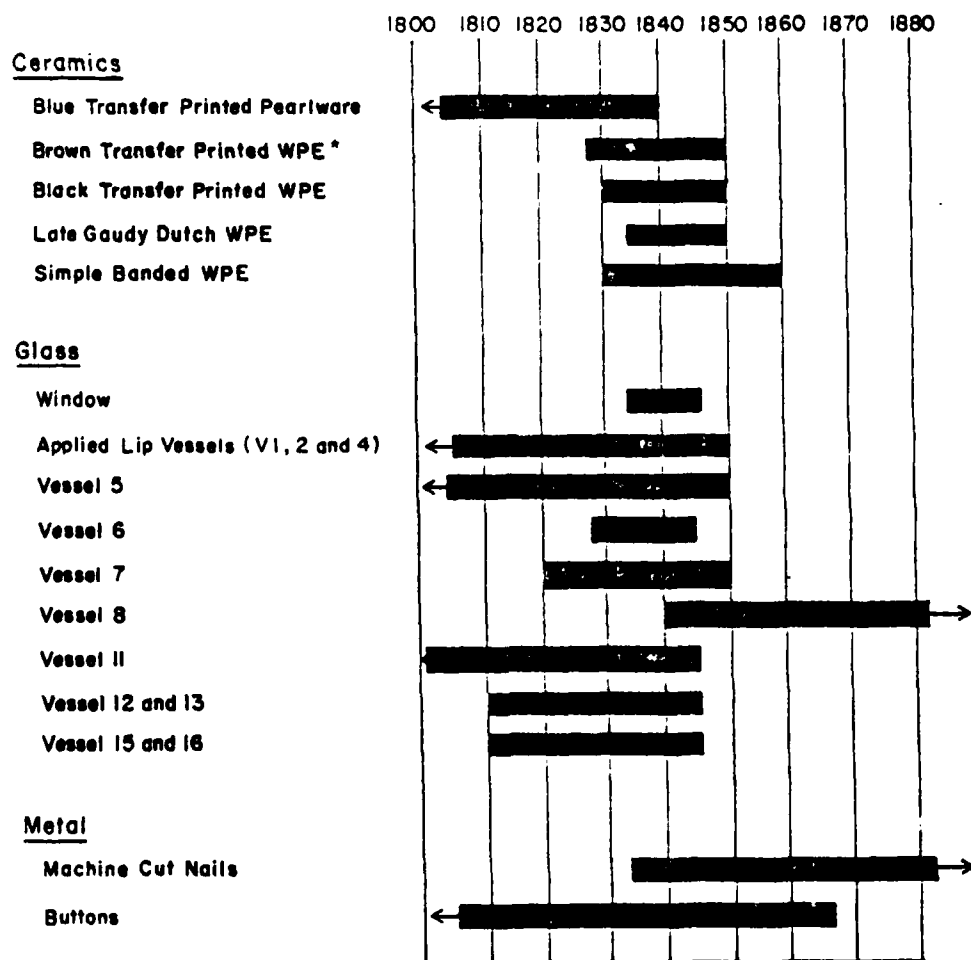
Table 20. Ceramic Chronology for 22Lo741.

Ceramic Type	Date Range	Median Date	No. of Vessels
Staffordshire Blue transfer printed pearlware	1804-1840	1825	1
Brown transfer printed white paste earthenware	1830-1850	1840	2
Black transfer printed white paste earthenware	1830-1850	1840	1
Late Gaudy Dutch	1835-1850	1842	2
Simple banded white paste earthenware	1830-1860	1845	1
TOTAL			7
MEAN CERAMIC DATE = 1839.1			

some important temporal information even though most of the metal artifacts are nondiagnostic and therefore of no importance here. As noted earlier, the three buttons from the site are similar to South's (1964:121, 134) Type 18. Based on data from Brunswick Town, buttons of this type have been dated to between 1800 and 1865. The time frame proposed for the structure at 22Lo741 falls well within this period. Nails are of particular importance to the establishment of a basal date of occupation. The hand wrought nails cannot be used as temporal indicators because their manufacture could have been carried out at the site on at least a "need" basis. The machine cut nails can be used to determine whether or not construction of the structure occurred before or after 1830. With the introduction of cut nail machines ca. 1790, nails became standardized but between the 1790s and the 1830s, machine cut nails underwent a progressive series of changes that can be used as aids to dating structures (Nelson 1963:5-7). By the mid-1830s, the perfected machine cut nail had been introduced, and the overwhelming majority of the identifiable machine cut nails from 22Lo741 are of this variety. The direction of iron fibers in the nail provided a further distinction between nails made before 1840 and those made after 1840 (Nelson 1963:11). Unfortunately, it was not possible to record this attribute on a sufficient number of nails to be meaningful. The four faucets recovered from the site are also attributed to the first half of the nineteenth century (Robert C. Sonderman, personal communication), and a similar time range has been assigned to the claw hammer. Beyond these few artifact types, no precise chronologic information could be obtained from the metal assemblage.

Between the three major artifact categories discussed so far, there was a wide range and degree of specificity in dating. While glass containers (i.e. bottles) in general are more sensitive temporal indicators than ceramics because they are generally not reused, the ceramics in this case gave a narrower range of dates (see Figure 21). The metal, specifically the nails, is most important for laying a basal date for the archaeological dating of the site. It must be noted that the ensuing summary deals not only with the archaeological dating of the site but also with the chronologic information provided by documentary evidence. The placement of the "old gin house" within a temporal framework relies heavily on the material remains recovered through excavation, and its use as a determinant of the site's basal date of historic occupation is of prime importance. While the artifacts also indicate the terminal date of historic occupation, the documentary evidence complements them at this end of the time frame.

Historic occupation at 22Lo741 was limited, spanning a period of approximately 10 to 15 years. The determination of the length of this period and its linkage to an absolute chronology through the archaeological remains requires that all of the temporally diagnostic artifacts be viewed as a whole. Of key importance in determining the date of construction are the architectural or structurally related group of artifacts. As noted above, the machine cut nails are the most sensitive temporal indicators in this group, indicating that the structure was



\*WPE = white paste earthenware

Figure 21. Dating of artifacts.

not built until the 1830s at the earliest and probably not before 1835. The only other diagnostic structural artifact, window glass, suggests a similar date. This determination is reinforced by the presence of several other artifact types not produced until after ca. 1830 (Figure 21), including all of the white paste earthenwares, the Jacksonian historic flask (Vessel 6), and glass Vessel 8.

As indicated earlier, the deeds dealing with the northwest quarter of Section 35 are important mainly for identifying site function and independently verifying the date of abandonment. The deeds make absolutely no reference to an actively functioning light industrial site of any sort. In fact, the deeds for the east side of the Tombigbee River across from the towns of Colbert and Barton contain very little information at all about standing structures and therefore, the deeds are not particularly useful in determining the initial date of historic occupation.

The terminal date of occupation and utilization of the structure was set not only on the basis of artifact types present at the site but also by some types not present. A date of ca. 1850 (or possibly slightly earlier) has been set for the abandonment of the site. Most of the ceramic types recovered have a terminal date of manufacture around this time or slightly earlier, as in the case of ceramic Vessel 4. This is also true of the glass assemblage. Virtually all of the glass vessels have terminal manufacturing dates of ca. 1840 to 1850 (Figure 21). But this is not conclusive evidence for the terminal date of occupation because any one of these pieces could have been deposited after manufacture had ceased. The lack of certain artifact types that came into production and use after this time also point to ca. 1850 as the terminal date of the site. There are no plain undecorated white paste earthenwares, ironstone, or stonewares that experienced their peak popularity in the second half of the nineteenth century (South 1977:211). Additionally, there are no nonapplied hand-tooled lips or nonpontil scarred bottle fragments from the site.

An independent source of verification of the 1850 terminal date derives from deeds concerning Section 35, Township 16S, Range 19W. Archivists traced land transactions involving the northwestern quarter of the section and surrounding area from 1834 to 1913. The first mention of a gin house appeared in an 1853 deed between James H. Griswold and James R. Hilliard involving the sale of the entire Section 35 (Lowndes County Deed Book 27:520). In this deed and subsequent deeds until 1858, references are consistently made to the "old gin house" on the second bank of the Tombigbee River as a landmark. Researchers have viewed the references to the "old" gin house as an implication that the structure was no longer being utilized. If the structure was still in use, it presumably would have been referred to by the owner's name, or at least not as the "old" gin house. Whether or not there is an interval of time between the site's abandonment and the beginning of its appellation as the "old gin house" is unknown. Nevertheless, probably at least several years passed before this occurred.

The placement of the structure at 22Lo741 within the period between ca. 1835 and 1850 has been achieved through a combination of methods and some fortuitous circumstances. The material remains function in a symbiotic and complementary fashion with the historic record, particularly in the assignment of the terminal date of occupation. Also of invaluable aid in placing the site within an absolute chronology was the fact that the occupancy spanned a period of major change in the ceramic and glass industries. In the ceramic industry, there was a shift from pearlwares to soft-fired white paste earthenwares around 1830, and in the glass industry there was a shift to two-piece molds ca. 1840 and to the use of the snap case and nonapplied lips between 1850 to 1860.

#### Structural analysis

After the brief occupational interlude during the prehistoric period, 22Lo741 was not utilized again until the second third of the nineteenth century. At this time, somewhere between 1835 and 1840, a small structure functioning as a multipurpose light industrial site was erected. Various activities were carried out here of which cotton ginning and forging/repair were most important. The following discussion of the historic utilization of the site deals with both the analysis of the structure and the physical remains of the associated human activities.

The site chosen for the structure was a small bench about halfway up the edge of the Holocene terrace that runs through the area. It lies a short distance south of the Barton Ferry Road. The structure was located at the extreme southern end of the bench, which is its highest and widest point. The original appearance of the site both before construction and after abandonment is unknown. Exactly why the structure was located here at a lower elevation as opposed to the top of the terrace will remain forever enigmatic. The structure was oriented  $12^{\circ}$  west of North (Figure 31) nearly paralleling the orientation of the terrace, which is approximately  $15^{\circ}$  west of North. The portion of the structure extant at the time of excavation measured 7.5 m north/south and 5.5 m east/west, excluding the brick platform (Feature 7). With Feature 7 included, it was approximately 9 m wide east/west. The northern end of the structure was not recovered. From the lack of architectural remains in the undisturbed sections of Unit 8 (S12 W8), it can be argued that the structure extended no more than an additional 1.5 m north of the northernmost point exposed. Bulldozers partially destroyed the western side of the structure. An exact determination of the amount of the site/structure destroyed was not possible, but it has been estimated that approximately 15 m along the western edge of the bench was destroyed. On a purely gestalt impression, it is felt that minimally 30-50% of the structure may have been destroyed. Although disturbed somewhat, the eastern and southern limits of the structure were extant.

Construction began with the clearing and leveling of the site. During this process, various amounts of the A1 soil horizon were removed, and

it is also at this time that later human activity significantly disturbed aboriginal remains. The lack of any significant in situ portions of the pre-1830 A1 soil horizon may indicate that there was at least minimal leveling of the site. After this, preparation of the ground to receive the walls of the structure began. Because of later structural modifications to the southern half of the building, it becomes useful at this point to deal with the north and south halves separately. For this purpose only the north half is considered to consist of those architectural remains located north of and including Feature 10. Although presumably a builder's trench was excavated for all of the major external and internal walls, excavators only recovered it to any large extent for the eastern external wall and Feature 10. This was the only internal wall with an associated builder's trench.

A builder's trench between 0.9 m and 1.3 m wide and about 30 cm deep was excavated near the eastern edge of the bench (Feature 1--East Wall) (Figures 22, 25, & 26). It had a flat and level bottom with nearly vertical walls. After its completion, a single long plank was laid directly on the floor of the northern half of the builder's trench, which was then completely refilled with a fine light yellowish brown sand (Figure 22). It was into this surface that the boards forming the base of the eastern wall were laid. While the exact function of the board in the base of the builder's trench and the intervening layer of sand remains somewhat enigmatic, it is suggested that it functioned to provide a firm base in the surrounding sand matrix for support of the outer walls of the structure. The major structural posts, Features 12, 13, and 15 and the possible post base in the northeastern corner of the exposed foundation, were also placed in the ground at this time. An additional footer trench was dug at the same time for the major internal wall, Feature 10 (Figure 23). This trench was fairly similar in morphology. It measured about 0.9 m wide and about 30 cm deep. The profile of the feature also had a flat bottom, but the sides were not quite as vertical. As with Feature 1, the builder's trench for Feature 10 was refilled with light colored fine silty sand. Excavators observed no trace of any planking or other load-bearing device in the western section of the excavated trench, so the reason for the digging of this footer trench is somewhat enigmatic. Once the footer trenches were refilled, three boards were laid side-by-side about 10 cm into the light yellowish brown sand fill. This served as a base for the construction of the walls and floor; fragments of small cross-members tying the boards together were recovered. These walls were placed in the center of the builder's trench and in the case of the eastern wall, over the plank in the base of the trench. The cross section of these walls was trough shaped. The presence of large quantities of brick rubble within these trough shaped features suggests that at least a low brick wall or footer, perhaps no more than two or three courses high, was placed over the boards.

Before proceeding further, it is necessary to introduce into the discussion an additional two structural features: Feature 1--North Wall and the light yellowish brown sand fill. Feature 1--North Wall does not appear to be a major internal support member as it lacked an associated builder's trench and was placed directly onto the subsoil. Otherwise, the feature was similar to the other walls. This section of Feature 1 probably functioned as a horizontal floor support. Within the

confines of these three walls, a layer of light yellowish brown sand was spread over the subsoil. This layer varied from about 10 cm thick along Feature 1--North Wall to 20 cm thick along Feature 10, and it also tapered from east to west. Additionally, the badly disturbed remains of a corner support post was uncovered at the junction of this wall with the eastern exterior wall. This layer served as fill between the subsoil and the wooden floor of the structure. A thin lens of charcoal, believed to be board remnants, was occasionally observed overlying this sand.

Because only the very bottom of the walls was present, only a limited number of statements can be made concerning wall configuration. The base of the walls has already been described. While part of the walls may have consisted of a brick footer, a good portion was made of wood as evidenced in part by the large numbers of moderate to large sized nails recovered from the site. Nails, bolts, screws, and tacks also seem to have been used in this construction. The distribution and amount of window glass recovered from 22L0741 is interpreted as structural remains indicating the presence of windows in the structure, and presumably enclosed walls.

The two postmolds (Features 12 and 13) located beneath the brick foundation in the southern half of the structure indicate that this section of the building underwent structural modification. Although the configuration of the original walls is unknown, they probably were not much different from those in the northern half. After a period of time, the southern half of the original structure was dismantled and replaced with the brick foundation uncovered by the excavation. The brick portions of Feature 1 (east and south walls) and Feature 7 were built as a single unit. The dating of this event is tenuous. The only diagnostic artifacts recovered from the associated builder's trench were portions of the Staffordshire Blue printed plate (Vessel 4). Three problems with the association of this plate with structural modification arise. First, several fragments were recovered from in situ deposits on the opposite side of the site. Secondly, the pieces recovered from the builder's trench were all near the surface. And finally, because of the uncertainty in identifying the dating of the maker's mark on the vessel, it is of limited utility here. Nevertheless, this artifact and the relatively short period of utilization of the site suggest a date of between 1840 and 1845 for the construction of this brick foundation.

The modification of the structure and particularly the addition of the brick platform (Feature 7) required the excavation of a new builder's trench (Figure 24). While it is possible that the brick section of Feature 1 was merely placed in the same trench as the original wall before its removal, a new area had to be cleared and leveled before construction of Feature 7. The color of the fill in this western portion of the footer trench was darker and more "middenlike" than usual in addition to containing patches of the usual light yellowish brown sand fill. It suggests that the trench was refilled with a combination of the old original fill and "midden" soil from the floor of the structure.

Cutting eastward into the leading edge of the terrace slope, the trench associated with Feature 7 was excavated to the same depth as the footer trench associated with Feature 1 (Figure 24) creating a large level area approximately 4.2 m (E/W) by 3.0 m (N/S). The north-south length of the footer trench is uncertain because of modern disturbance along its southern end. At its eastern end, it was excavated to a depth of 0.65 m. Once the ground had been prepared, the southern half of Feature 1--East Wall, Feature 1--South Wall, and Feature 7 (brick platform) were laid as a single unit. Although the builder's trench associated with the southern exterior wall of the structure had been obliterated, the remnants of the walls extant at the time of excavation suggested that it was excavated to the same level as the eastern builder's trench. The bricks of the main walls were laid in either a common or stretcher bond fashion and were set with a lime-based mortar. Located half a meter east of the eastern wall, the brick platform was constructed in a series of stacked, progressively smaller layers of brick that were also set with a lime-based mortar. The junction points of the various walls verify the contemporaneity of the construction of these major brick portions (Figures 31 and 32).

The heights of these structural features are conjectural although some information can be inferred from the east-west running site profiles, particularly those along the S16 and S18 grid lines. Presumably, the walls were built up to floor level and functioned at least partially as floor supports. Feature 7 was also built up minimally to ground surface, which roughly coincided with the floor of the structure. As will be discussed below, Feature 7 probably supported a cotton press. There may also be a second, small, east-west trending brick structural feature at the north end of the area affected by the second phase of construction. A junction similar to that in the southeastern corner of the structure was uncovered at this point (see Figures 3 and 33, junction of Features 1, 7, and "11"). Only the basal course was present and its upper surface rested at the same level as the base of Level 4a. Although it is not physically connected to Feature 11, it does align with Feature 11. The western portion of Feature 11 lies immediately on the subsoil, and there is no evidence that it ever consisted of more than one horizontal course of brick.

After construction of the brick foundation and platform was completed, the footer trenches were refilled to ground level. In the case of refilling Feature 4, this entailed sloping the surface to match the slight slope of the terrace edge. At least a partial covering, apparently composed of only a few large support posts, was constructed over the platform. The small number of postmolds associated with Feature 7 also suggests that the covering had open or partially open walls.

Before turning to a discussion of the physical remains of activities within the structure, two additional features must be introduced: Feature 9 and the Feature 8 and Feature 16 complex. As described above,



Feature 9 is very puzzling. It is a large bathtub shaped pit feature that was dug at the northern end of the structure, and it is unclear whether it was located within, partially within, or totally outside of the structure. Unfortunately, the areas west and north of the feature were extensively disturbed. The final structural member to be discussed is actually a set of two associated features: Features 8 and 16 (see Figure 4). Feature 8 is the short low remains of an east-west trending line of brick three courses high (Figure 27). Feature 16 is located at the western terminus of Feature 8 and consists of a zone of heavily burned earth. These two features at the southwestern edge of the site (Figure 4) are believed to be the remains of a salvaged forge. There is no doubt that Feature 16 was the site of a stationary fireplace, but the assignment of Feature 8 as a part of the forge rather than an internal support feature is a bit more tenuous. Not only is Feature 8 directly associated with the burned area, but it also extends slightly above the approximate level of the floor. It must be noted that excavators could not determine whether the southern half of the structure was floored with wood or just coated with a layer of compacted sand. The removal of a large tree from the southeastern corner of the structure (Unit 24) not only disturbed the eastern end of Feature 8 but also removed the bulk of the cultural deposits in the area. This obviated any possibility of determining whether an internal support feature extended perpendicular to the eastern wall of the structure at this point. There was at least one brick feature definitely associated with Feature 16, the brick concentration previously described (see Figure 4). Interpretation of its function, however, was not possible.

Within the confines of the structure described above, several different activities were carried out. The prime activities were metal work and the processing of raw cotton through a gin. Consumption of food and drink were also carried out at the site. The identification of these two minor activities along with forging activities proceeded mainly on the basis of artifacts recovered from the site and the presence of an apparent forge. Identification of the other major function of the structure as a cotton gin is more tenuous, relying on only a limited amount of material evidence and on information contained in the deeds for Section 35. Since the southern half of the structure contains the most complex interplay of discolorations (areas) and also contains much of the remains associated with forging activities, it will be discussed first.

The general location of the forging area is in the northern and western portions of the south half of the structure. Measuring approximately 3 m (N/S) by 5 m (E/W), the area is trapezoidal in shape. The northern limit of the area abuts Feature 10, and Features 8 and 16 form its southern boundary (see Figures 4, 31, and 32). Both the western and eastern edges are defined by disturbances: the truncated edge of the site on the west and the tree removal in Unit 24. Internally, two very distinct zones characterize the activity area. Forming an L-shaped zone along the north and west edges is an area characterized by dark brown soil containing large amounts of brick rubble and charcoal

flecking. This area was heavily heat affected (see Level 4 descriptions for Units 18, 19, and 26). It is composed of the following proveniences: Unit 18, Level 4, Area 2; Unit 19, Level 4, Areas 1 and 2; Unit 26, Level 4, Areas 1-4; and Feature 16. East and south of this is a zone of light yellowish brown sand that forms the floor of the structure. The lighter colored sand was virtually sterile, while the darker colored zone contained a relatively dense amount of artifactual remains. This latter zone also contained several structural features. While it is unclear as to whether this area of the structure contained a wooden floor, the east profile of Unit 19 (see Figure 29) suggests that at least the northern end was floored with wood.

The artifacts recovered from the various zones comprising the forging area, as well as those from the overlying in situ horizons, lend further support to its designation as a forge. A wide variety of materials that can be associated with metal working activity were recovered from the site; individual artifact descriptions have already been presented. It is not merely the presence of these artifact types at the site that is important; it is also crucial to consider their spatial distribution and the presence/absence of any clustering.

Although the barstock did not appear to be highly clustered in any one particular area, approximately one-third (six specimens) were recovered from the vicinity of the forging area. In addition to the pieces identified as barstock are a variety of unidentified flat iron pieces. It is highly probable that some of these fragments represent raw material. Other metal artifacts associated with the activity area were a forged eye bolt, a wrought staple, chain fragments, wire, a forged iron ring, and nails. Compared with other areas of the site, such as those along the structure's walls, nail density in the forging area was low. However, very few tools were recovered here. A chisel was recovered from Feature 16 and several hammer head wedges were also found in the forging area. Most of the tools were recovered from either Feature 9 or along the eastern wall of the structure (Unit 3, Level 4, Area 2). This includes a number of wedges in various stages of manufacture. The remains from the forging area and the structure in general suggest that the forge functioned for repair purposes as well as for the manufacture of tools such as wedges and nails.

Tools, raw material, and finished products were not the only artifactual evidence indicating the presence of a forge: there was also a fairly heavy concentration of melted lead across the area encompassed by Units 19, 22, and 26. The density of lead dropped dramatically both north and south of the forging area. But there is a problem with the lead. While its presence is important, the fact that it is melted cannot be used as evidence that it was waste material because the structure burned. Unidentified brass, while clustering entirely within the northern half of the structure, was more numerous in Units 19 and 26. A number of scrap pieces, melted pieces, and curved pieces possibly from machinery were recovered in direct association with the forging area.

Several nonmetallic varieties of artifacts typically associated with forging activities also clustered in this area. Charcoal, ash, and heat altered soil here has been discussed previously. Virtually all of the slag and cinder recovered from the excavation were concentrated in and associated with the forging area. Limestone also demonstrated a clustering in this area in addition to a second cluster around Feature 7. All of these nonmetallic (mineral/composite) artifact clusters are characterized by the relatively small size and weight of the constituent members. This is precisely the composition one would expect for material from a floor. Larger fragments would have been removed and deposited elsewhere, perhaps in an outside dump over the edge of the terrace or in Feature 9. Only Feature 9 produced any sizeable pieces of cinder.

Located in the southwest corner of Unit 26 is a group of interrelated features and areas. Lying at the floor level, Feature 11 appears to have formed a flooring unit. Directly overlying the feature at its western extent was a discoloration forming a right angle (Unit 26, Area 3). This area was sterile except for the ever-present charcoal and may have been a stand for the support of a working platform or anvil. It was fairly small in size, as it did not extend beyond the limits of Unit 26. Area 1 in Unit 26 lay at and above the floor level and was composed mainly of ash, brick, and charcoal fragments. This area is believed to be a product of the nineteenth century salvaging operations at the site. This activity is detailed further below.

Evidence for the presence of a cotton gin at 22Lo741 is more limited and inferential. Sources include the structural aspects of the site, the artifacts, the nineteenth century deeds for Section 35, and the body of literature dealing with cotton ginning. Information concerning aspects of gin houses crucial to their identification in the archaeological record is very scanty. Although most plantations at the time had their own ginning operations, private commercial gin houses did exist. Burkett and Poe give some of the reasons for the presence of commercial cotton ginning operations.

There were many items of expense which made the small gin too expensive. It was operated but a small part, not only of each year, as must be true of all gins, but only a small part of the ginning season; parts go out of repair, and interest on the investment amounted to much when the small returns from ginning the crop of a single plantation were considered (Burkett and Poe 1908:219-220).

Photographs, line drawings, and written descriptions by Tompkins (1901), Brooks (1898), and Burkett and Poe (1908) present an idea of the architecture of a gin house. It should be noted that there appear to have been only minor structural modifications to the architecture of gin houses during the early part of the nineteenth century (Burkett and Poe 1908:218-219). This period extends from the patenting of Eli Whitney's saw gin in 1794-1796 (Brooks 1898:202) to the spread of steam

power in the ginning industry after the Civil War, ca. 1870 (Tompkins 1901:44). Before this period, ginning operations were generally small and contained within a single building. By the 1870s, "the constant danger of fire which hangs over all cotton gins has caused the different buildings which go to make a complete establishment to be separated" (Fordyce 1906). The advent and spread of labor-saving devices such as steam power during the post-Civil War period also led to the establishment of much larger commercial operations (Brooks 1898, Tompkins 1901, Fordyce 1906).

Typically, a pre-Civil War gin house consisted of a moderate, one and a half or two-story structure with a pitched roof. Most of the building was usually enclosed to protect the machinery, cotton, and workers from the weather. Only the section of the ground floor containing the power source (i.e. mules and/or horses) was left unsided. Tompkins (1901:33-35) indicates that the ginning process required five different spatial divisions within the gin house. One area was for the storage of raw seed cotton from the field before ginning, and another area was for the placement and operation of the ginning machinery. While the storage area for the raw cotton was usually located on the upper floor, it was occasionally relegated to a separate nearby structure (this does not appear to be the case at 22Lo741). The cotton gin itself was always on the second story. Two lint storage areas were typical. The first served as an immediate collection point for the deseeded cotton lint as it came off the gin, and this area would have been on the second floor near the cotton gin. The second lint room was used for the storage of the cotton before baling. Architectural cross sections (Tompkins 1901:34, 45) and photographs (Brooks 1898:205, 209) place this area in the enclosed portion of the ground floor. It was also floored with wood, apparently to keep the stored cotton clean and free of moisture. According to Tompkins (1901:33-35), the final area housed the power source and drive train. Located on the ground floor of the building underneath the ginning machinery, this area had a dirt floor and was usually left open on the sides for ventilation. Although steam power was available by the 1830s and 1840s, it was not used in the cotton gin industry until the postslavery period. A combination of factors such as the danger of fire and the cheapness of slave labor seems to have inhibited the spread of steam power in the industry.

Steam power would have brought responsibility with no commensurate advantages from the planter's view. The boiler might explode, and if it did, the smallest part of the loss would have been the engine and the boiler. Two or more thousand dollars worth of negroes might be killed, and perhaps many more wounded. This would make large doctor bills, and labor and attention to nurse them. The special care of the sick was the most particular care of the humane planter. Then, too, a steam engine would be getting out of order, repairs would have to be obtained from machine shops, which were few and far distant (Tompkins 1901:44).

Depending on the size of the ginning operation, teams of two to four mules or horses seem to have been usual. The animals were harnessed to a wheel or set of levers attached to a vertical shaft. There was a wooden cog at the top of this shaft above the lever that meshed with a second, vertically placed cog that was attached to a horizontal shaft hung from the rafters. A belt attached to the saw shaft of the gin transferred power from the horizontal shaft to the gin above (Brooks 1898:206-210; Tompkins 1901:35).

An additional and very important part of the cotton gin not included in Tompkins's list is the baling apparatus, which generally consisted of a large screw press located outside of the structure (Brooks 1898:205, 209; Tompkins 1901:40). An architectural cross section of a gin house in the 1874 edition of the American Cyclopedia (Vol. 5, p. 405) places the press within the gin house. Tompkins described the most common variety of screw press.

The necessary quantity of cotton to make a bale could be packed by the weight of two men into a box with dimensions equal to the length and thickness of the bale and about nine feet high. To press this down to the forty inches was the work of the screw. A heavy frame was made containing the box as described...This frame extended above the box and held a large nut made of four massive blocks of timber firmly pinned together. Through this wooden nut passed a large wooden screw, cut out of a log 14 to 16 inches in diameter, and with threads about four inches broad or eight and one half inches pitch, fitting in similar threads in the nut...From the upper end of this screw, long sloping levers extended very nearly to the ground when the screw was down, and to these levers, mules were hitched and driven around to pull the screw up and down in packing the bale (Tompkins 1901:34, 40).

Before the advent of steam operated presses, a number of hand operated presses appear to have been in use (Brooks 1898:205, 209; Tompkins 1901:59). Although not stated in the literature, presumably a firm base under the press would be required because a great deal of downward force would have been generated when compacting the loose lint cotton into the 300 to 400 pound bale common for the period between 1830 and 1849 (Burkett and Poe 1908:222). The literature also does not indicate the size of the area required by the cotton press or the variation in the sizes of the presses. Information concerning the overall size of early cotton gins is also lacking, but by utilizing photographs of nineteenth century cotton gins (Brooks 1898:211; Tompkins 1901:34; Davis 1981:34), some estimation of size can be made. The buildings in these photographs are estimated at approximately 20-30 ft (6-9 m) by 15-25 ft (4.5-7.6 m). Whether this is an average size or not is uncertain, but the structure at 22Lo741 does fall into this range.

A number of structural features present at 22Lo741 suggest a similarity to the aforementioned description of gin houses. First, the use of a brick footing and the design of the builder's trench suggest that the external walls were designed to support a second story as well as a roof. Secondly, Feature 7, the brick platform, is probably a base for the positioning of an unknown variety of cotton press. The designation of this feature as a cotton press platform proceeded along several lines. The silty sand on which the structure rests may have required an artificial base. The stepped form of the platform could have served as a means of spreading the distribution of the force generated during baling, and it also would have provided a level, sheltered area for the cotton press. The general lack of artifacts associated with the feature also suggests the presence of a piece of machinery large enough to warrant salvaging. Admittedly, the identification of Feature 7 as a cotton press platform is tenuous, but other possible functions are few. One of these would be as a boiler platform. On the basis of the dating of 22Lo741, and in comparison with the nineteenth century boiler platform excavated at the Waverly plantation (Adams 1980:237-262) the possibility that it functioned as a boiler platform was discounted.

The northern half of the structure appears to have functioned as a storage area that was enclosed and floored with wood. The fill beneath the floor was virtually sterile, and only a few artifacts were recovered in the north half of the structure, including such tools as a punch and several wedges, in addition to other nonstructurally related artifacts like tubing and metal container fragments. Such a low density of artifactual remains other than structural materials suggests that this area of the building was kept clean for a specific purpose, such as the storage of an organic product like cotton lint.

The presence and purpose of Feature 9 in this area is somewhat of an enigma and its function remains unknown. The fill of the feature produced a wide variety of artifact types, including domestic items (ceramics, glass bottle fragments and an inkwell, metal container fragments, and a blade fragment), tools (file fragments and pliers), various structural remains (window glass, both machine cut and hand wrought nails, bolts, and nuts), and other general garbage such as cinder, charcoal, and brick rubble. The broad spectrum of the artifact content suggests that at the end of its "life," the feature served as a garbage disposal area.

The location of the power source and drive train at 22Lo741 presents something of a problem. There was no area large enough within the extant portions of the structure to accommodate this fundamental part of the gin house. The forging area occupied the southern half of the structure, thought to be the two-storied portion of the structure. Furthermore, the area east of the structure is not flat enough to have accommodated the power source. It is postulated that the power source lay to the west of Feature 16 and the forge area and was destroyed before excavation.

Artifactual evidence for the presence of a cotton gin is meager, consisting only of the driveshaft recovered from the surface of the site. The identification of this iron artifact (Figure 17) is based on morphological similarities to one pictured by Tompkins (1901:37). There were also a number of brass fittings and machine parts at the site, but positive identification of these as parts of a cotton gin was not possible. Perhaps the most conclusive evidence indicating that the structure at 22Lo741 served as a cotton gin lies in the series of land transfer deeds and deeds of trust for the area dating from the 1850s. As discussed previously, after 1853 land transfers involving the northwest quarter of Section 35 make a reference to an "old Gin House." In describing the property boundaries, these deeds consistently refer to the requirement of the new landowner to leave "land sufficient for a Road on the second bank by the old Gin House" (Lowdes County Deed Book 27:520). The road apparently refers to the Barton Ferry road. It is also significant that 22Lo741 was the only industrial site located during the survey of Disposal Areas C-6 and C-7 (Hambacher 1982), situated opposite the towns (Colbert and Barton and their respective ferry landings).

Although metal working and the operation of a cotton gin are the major activities represented at the site, artifacts indicate some minor activities, including the consumption of food and alcoholic beverages. Most of the ceramics were recovered from disturbed contexts, and those recovered from in situ deposits came from the builder's trench associated with Feature 1 and primarily from the southwestern part of the site. The distribution of glass vessel fragments indicates that alcoholic beverages were consumed at the site throughout its use. Of the 16 discrete glass vessels associated with the nineteenth century occupation of the site, at least 11 are alcoholic beverage bottles, and wine is the predominant variety. Feature 15, a postmold associated with the initial construction phase, contained the fragments of a dark green wine bottle base (Vessel 13). Vessel 12, another wine bottle fragment, was recovered broken in situ on the floor of the structure in the forging area, adjacent to and west of Feature 11 and the associated Area 3 in Unit 26. This partially burned bottle appears to have been deposited during the conflagration that destroyed the site. Fragments of other glass vessels were scattered across the site in the overlying "midden." They were particularly numerous along the western side of the site and through the center of the site along Feature 10 and in the forging area. Finally, some form of written records were generated at the site as evidenced by the presence of an inkwell.

It has been briefly mentioned that there was evidence of a fire and subsequent salvaging operations at 22Lo741. This fire is considered to have totally destroyed the structure, hence its abandonment. The danger of fire was ever present at cotton gins (Fordyce 1906), probably because of the flammability of the dry seed cotton and cotton lint. The presence of a forge would have compounded this danger at 22Lo741. Evidence for a major conflagration is manifold and pervasive across the site. The major structural walls of the building were burned, as were

the wooden portions of the floor, and some of the glass exhibited signs of heat exposure. The good state of preservation of many of the metal artifacts may be fire related. While it is well-known that a lack of corrosion on metal artifacts is often associated with fire, recent studies indicate that it is not the direct result of the interaction of heat and metal (Vergil E. Noble Jr., personal communication). Rather, it appears that fire generates a microenvironment in the soil conducive to the prohibition of corrosion. Evidence of salvaging activities at the site is more inferential in nature. The lack of any large whole or even fragmentary pieces of machinery except for the driveshaft suggests that it was removed during the abandonment of the structure; it is unclear whether the machinery was removed before or after the destruction of the structure. The machine parts that were recovered were highly fragmentary, as were many of the other artifacts. All of the major walls in the northern half of the structure were filled with rubble, and at least some disturbances of the western edge of Feature 7 occurred at this time. Additionally, there are several areas within the structure that appear to be the result of salvaging activities. These include the deposits overlying Feature 11 and that designated as Area 1 in Unit 26. Most of the forge itself also appears to have been salvaged (see Features 8 and 16 descriptions). Salvaging of structures seems to have been a common practice in the nineteenth century, and this appears to have been the fate of many of the structures at the Barton townsite (W. Stephen McBride, personal communication). It should also be remembered that the brick portions of the structure itself were originally built from salvaged bricks. Finally, the salvaging or prior removal of valuable equipment, even in the form of damaged parts is to be expected because of the high costs of cotton ginning and forging equipment.

In summary, the presence of a moderately sized multifunctional light industrial site has been identified at 22Lo741. This structure housed both a cotton gin and a forge/smith during the second third of the nineteenth century. The identification of the functional and temporal placements of the site has been achieved through the combined information contained in both the archaeological and the archival records. Although ownership of the structure remains unknown, the land on which the site is located was intimately associated with the growth, development, and demise of the towns of Colbert and Barton.



## EXTERNAL CORRELATIONS AND CONCLUSIONS

During the second third of the nineteenth century, activities at 22Lo741 took place not in isolation or in a vacuum but within the context of the growth, development, and ultimate demise of the Colbert and Barton townsites on the west bank of the Tombigbee River. Much of the general settlement history of the Upper Tombigbee Valley and the Colbert, Barton, and Vinton townsites has been discussed elsewhere (Elliott 1978; Doster and Weaver 1981; Weaver and Doster 1982; Minnerly 1982, n.d.; Cleland and McBride n.d.) and will only be dealt with here as it relates to 22Lo741 and its role in the local history. As will become clear below, the development of the ferry system and the local transportation network in the area was particularly crucial.

The Chickasaw and Choctaw cessions of 1816 first opened the region now known as Lowndes County, Mississippi, to white settlement (Doster and Weaver 1981:40). In 1820, after surveyors discovered that a large part of the cession east of the Tombigbee River lay in the state of Mississippi, this area was designated as Monroe County. Hamilton, located approximately one mile east of the Tombigbee River and two miles north of the mouth of the Buttahatchee River, was designated as the county seat the following year (Doster and Weaver 1981:46). In addition to Hamilton, the early 1820s saw the establishment and development of Columbus and Cotton Gin Port as major commercial centers serving the area. Although settlement west of the Tombigbee River was prohibited until the Treaties of Pontotoc in 1832 and Washington in 1834 officially opened up the area, it was not entirely closed off (Elliott 1978; Doster and Weaver 1981). Traders are known to have been operating west of the Tombigbee River and by 1834 Silas McBee was operating a ferry at Colbert in the same location where Micajah Bennett had formerly kept it (Elliott 1978:47). Even though the exact location of this ferry is not clearly known, or the amount of traffic which flowed over it, the presence of the ferry clearly attests to the movement of people across the Tombigbee River prior to 1834.

By November 1835, the town of Colbert had been platted and town commissioners were selling town lots (Elliott 1978:48-49). One of these commissioners was John L. Allen, whose name appeared prominently in the early land transactions involving Section 35, Township 16S, Range 19W. John L. Allen and his wife, the former Margaret Colbert, "judging by their participation in town activities and their initial ownership of the Colbert townsite, seemed to have played the leading role in the establishment of the town" (Elliott 1978:49). Colbert experienced fairly rapid growth and prosperity throughout the latter half of the 1830s and the early 1840s. During this time Colbert became an important node in the regional transportation network, particularly in the route between the two largest commercial centers in the area; Columbus (founded in 1822) and Aberdeen (founded in 1836). This was at least partially attributable to its position as a ferry crossing, a landing site for steamboat traffic, and its proximity to the Black Priarie lying west of the Tombigbee River.

The growth of Colbert as a transportation and small commercial center also saw the growth of the transportation network by which the town was connected to the other large commercial centers and the agrarian hinterlands. As stated above, it is known that there was a ferry in operation at Colbert by 1834. Although the precise location of the ferry landing on the east side of the river is unknown, the landing on the west side lies almost due west of site 22Lo738, an historic domicile dating to the middle of the nineteenth century (Hambacher 1982). By 1835 the Colbert Starkville Road had opened, connecting the burgeoning town of Colbert to the Black Prairie. This road continued southeastward from Colbert to the commercial center of Columbus (Minnerly 1982:67). Within the next three years (1835 to 1838) an additional road had been opened connecting Columbus and Aberdeen with Colbert acting as the primary ferry crossing (Minnerly 1982:88). While the complexity of the transportation network continued to grow throughout the 1840s one feature remained constant. The roads heading west from the eastern side of the Tombigbee River continued to funnel into the Colbert-Barton-Vinton area and their associated ferries. By at least 1847 this network had developed into a three pronged junction on the eastern side of the river. One road continued north over the Buttahatchee River at Ringo's Ferry to Aberdeen; the second road ran northeastward to Caledonia, paralleling the Buttahatchee River; and the third ran southeastward to Columbus (Minnerly 1982).

It appears that until 1843 the Colbert Ferry was the only ferry in operation in the immediate vicinity of 22Lo741 and the towns of Colbert, Barton, and Vinton. In 1843 Sherod and Cader Keaton were authorized to establish a ferry near the mouth of Millstone Creek, below the Buttahatchee River, the future location of the Vinton townsite (Elliott 1978:52; Minnerly 1982; Cleland and McBride n.d.). This ferry served to divert some of the traffic flow from the Colbert area. The ability of the area to support two ferries also points to the increased flow of traffic through the area at this time of economic growth.

The establishment of Keaton's Ferry at Vinton would have required the extension of the road network feeding into the Colbert Ferry northward to allow its incorporation into the regional transportation network. Presumably, the road would have been located on well drained ground relatively secure from the yearly flooding of the Tombigbee River, such as the Holocene terrace which cuts through the western portions of Disposal Areas C-6 and C-7. The point at which this road would have turned west from the Barton Ferry Road and its exact configuration are unknown.

The gradual shift of the transportation network away from the Colbert Ferry continued with the establishment of a road north of Colbert in 1846 (Elliott 1978:52). Furthermore, Agur T. Morse had established a ferry at Barton by 1848 (Minnerly n.d). Prior to this, in January of 1848 Margaret Allen had been authorized to establish a ferry at Colbert. This ferry was apparently first established at "the Rock Bluff at or

near the termination of Washington Street" and then moved "to the end of Tombigbee Street in the northeastern corner of Colbert" (Elliott 1978:52-53) three months later. In December of the previous year much of Colbert had been devastated by a flood and was largely abandoned in favor of the higher ground at Barton. It is assumed that these two events were intimately related to one another. Like Colbert, Barton functioned as a key node in the regional transportation network, linking the Black Prairie with the river thoroughfare to Mobile and road network heading northeast to Aberdeen.

The profitability and importance of these ferries as links in the regional transportation network is exemplified by the intense competition which surrounded them in the mid-nineteenth century and the high bonds required by the licenses for their operation. Between 1848 and 1851 four rival parties vied intensely for the ferry traffic in the Colbert-Barton-Vinton area (Minnerly n.d.). In January 1848 Margaret Allen was authorized to keep a ferry at Colbert. The following March Agur T. Morse was authorized to keep a ferry at Barton. Keaton's Ferry at Vinton was also chartered about this time paying \$2,000 for the ferry rights for the period between 1847 and 1849. These ventures were relatively short-lived, for by 1851 James Hilliard and James Griswold, both prominent Barton residents, had entered into a business partnership and succeeded in their petition to abolish the Morse and Allen ferries. This petition was designed to allow Griswold and Hilliard to immediately establish a ferry at Jackson Springs, the location of the present Barton Ferry landing (Elliott 1978:53; Cleland and McBride n.d.). The Morse ferry rights were bought by Hilliard and Griswold for \$800. A brief attempt was made in 1853 by Reuben Littleton to re-establish a ferry at Colbert, but this was effectively blocked in court by Griswold (Elliott 1978:53-54). After 1851, the Barton Ferry was the main ferry serving the area and it apparently did quite a brisk business considering the high bonds required for the maintenance of the license to run the ferry. In 1853 Griswold paid \$2,500 for the rights to maintain the Jackson Springs ferry for the two year period between 1853 and 1855 (Cleland and McBride n.d.). The prosperity of the Barton townsite continued throughout the 1850s, with the town being incorporated in 1854, and into the 1860s. One of the major blows to the prosperity of the town was the arrival of the Mobile and Ohio Railroad at West Point in 1857 (Doster and Weaver 1981:98; Minnerly n.d.; Cleland and McBride n.d.). With the demise of Barton as a transportation node, the focus of the activity moved northward to the Vinton townsite and westward to West Point. By the time Barton was abandoned, 22Lo741 had long passed into disuse and was known only as the "old gin house".

Contemporaneous with the terminal occupation at Colbert and the settlement of the Barton townsite is the small community grouped around the junction of the Upper and Lower Barton Ferry roads on the eastern side of the Tombigbee River. This community has been previously described and documented by Hambacher (1982). Composing this community was a minimum of four domiciles (22Lo734, 22Lo735, 22Lo737, and

22Lo738), the cotton gin/smithy (22Lo741), and one structure of unidentified function (22Lo742). The community appears to have been established sometime during the latter half of the 1840s. This combined with the fact that land titles in Section 35 were consistently held by residents of Colbert, Barton, and Vinton indicates that the community arose in response to the development of Colbert, Barton and Vinton as key nodes in the regional transportation network. Since the structure at 22Lo741 appears to have been one of the earliest sites on the east bank of the Tombigbee River, it too may have played a role in the establishment of the community opposite Barton. As a cotton gin, 22Lo741 would have been available to provide services to local farmers on a seasonal basis (i.e. fall), while as a smithy/forge the facility would have been able to provide repair and light manufacturing services to the local community and possibly to the ferry operations along this section of the Tombigbee River. The fact that the services of a cotton gin were only required during the harvest season may have been instrumental in the ability of the facility to provide two seemingly incompatible services. The site was located along the major transportation route between Columbus and Aberdeen, near where it crossed the river. Although a ferry was not established at Jackson Springs until the latter 1840s allowing the present configuration of the Barton Ferry road system to develop, there was probably a road in the vicinity at least by 1843. Presumably, this road would have served to connect Keaton's Ferry at Vinton with the rest of the road network in the area.

While the community opposite the Barton townsite persisted after the demise of Barton on into the 1870s (Hambacher 1982), the life history of the light industrial facility at 22Lo741 was much shorter. This is attributable to the destruction of the facility by fire sometime during the early part of the 1850s. During its brief life it served not only the ginning but also the blacksmithing needs of the community.

The socioeconomic status of the owner(s) of the structure at 22Lo741 is highly problematic. While there are records as to land ownership in the area, there are no records concerning the actual ownership of the structures located on that land. It is presumed here that the land owners had at least a vested interest in the structures on their land, and were likely also its owners. Throughout the middle of the nineteenth century the land on which 22Lo741 is located was owned by prominent citizens of Colbert and Barton. The first individual mentioned in the deeds concerning the northwest quarter of Section 35, Dr. Edwin Watkins, is known to have owned Lot 6 in Block 3 at Colbert, and was responsible for renewing the bond for the Colbert Ferry in 1836, and served on the commission appointed to lay out new roads in the area (Elliott 1978:50). In 1834 Watkins transferred ownership of Section 35 to Silas McBee, who kept a ferry at Colbert in the latter portion of the 1830s. Five days after the initial transaction, the western half of the section was transferred back to Dr. Watkins. After this point there is no record of any land transactions involving the ownership of the western half of Section 35 until April 1851.

Sometime during the 17 year gap in the deed records land ownership of the northwest quarter of Section 35 shifted from Dr. Watkins to John L. and Margaret Allen. Both John and his wife Margaret played a key role in the establishment of the Colbert townsite in the mid 1830s. John L. Allen had been a sub-agent at the Chickasaw agency when he married Margaret Colbert (Elliott 1978:49). Under the Chickasaw Treaty of 1834 Margaret Allen had received Fractional Section 6, Township 7, Range 8 East; the land on which the town of Colbert was eventually founded (Elliott 1978:50). Margaret's husband, John L. Allen, appears to have been one of the original seven town commissioners of Colbert responsible for the initial advertisement and sale of lots at Colbert. Three years later, in 1837, the Allens deeded 15 shares of Fractional Section 6 to nine men, retaining five shares for themselves. This was not the last activity in Colbert by the Allens, however, as in 1848 Margaret was authorized to establish a ferry at Colbert and was given a 10 year lease on it. The lease was never fulfilled, because James H. Griswold and James R. Hilliard successfully forced the abolition of the Allen and the Morse ferries at Colbert in 1851 (Elliott 1978:53; Cleland and McBride n.d.). It was in April of that year that the lands in question were transferred to the ownership of James R. Hilliard, indicating the formation of the Hilliard-Griswold partnership, which controlled the Barton Ferry after 1851.

It is in the deed transactions between Hilliard and Griswold two years later (1853) that references to the "old gin house" on the second bank of the east side of the Tombigbee River begin to appear, signaling the demise and abandonment of the light industrial facility at 22Lo741. The prominence of Griswold and Hilliard in the Barton community is indicated through several sources. First, as a partnership they were influential enough to force the abolition of the two ferries at Colbert and wealthy enough to post a sizable bond for the establishment of a new ferry at Jackson Springs in 1851. James H. Griswold is also known to have been involved in the ownership and operation of a number of businesses at Barton, including a blacksmith shop, a store, a daguerrotype studio with his brother Fedum, a warehouse, and possibly a mill (Cleland and McBride n.d.). Clearly, Griswold was one of the wealthier members of the Barton community during his residence there between the years of 1851 and 1859 (Cleland and McBride n.d.).

By the time Griswold and Hilliard came into the ownership of the land in Section 35 the facility at 22Lo741 had already been abandoned and no longer played a role in the Colbert and Barton communities and the small community at the junction of the Upper and Lower Barton Ferry roads, other than as a landmark mentioned in the deeds. Although the question of actual ownership of the light industrial facility at 22Lo741 remains essentially unanswered, it would appear from the land ownership records that the Allen family is the most likely candidate. This is assuming that ownership of the land in question and the structure at 22Lo741 are interrelated, of course. It should also be noted in conclusion here that the establishment of the blacksmith shop in Barton by Griswold in

1851 (Cleland and McBride n.d.) may have provided the necessary conditions under which the cotton gin/smithy at 22Lo741 was no longer a viable economic venture and not worth reconstructing after the original structure had burned. This presumably would have provided the impetus for the abandonment and salvaging of usable machinery and tools from the structure after the fire.

Not only does the excavation of 22Lo741 shed light on the general history of the Colbert and Barton communities, it also provides information on another facet of the development of industrial activities, facilities, and systems in the Upper Tombigbee Valley. Traditionally, the Southern economy during the nineteenth century has been typified as being a primarily agriculturally oriented economy with the importation of needed industrial goods from other parts of the country, particularly the northeast (Weaver and Doster 1982:143). Recent research, however, has shown that domestic industries were much more important than previously thought. After the early 1830s the economy began to diversify with the establishment of primary processing industries, particularly after the economic panic of 1837 (Weaver and Doster 1982:143-144). These primary processing industries first appeared in response to the needs of the plantations and the large farms, especially in the realm of construction/repair (blacksmithing for instance) and crop processing, such as cotton ginning. Such industrial activities were initially and largely closely associated with the plantations and the large farms (Weaver and Doster 1982:144). As a result, industrial facilities for cotton ginning, sawmilling, gristmilling, and blacksmithing were often clustered together. This situation is seen at both the industrial community of Bay Springs in Tishomingo County (Adams et al. 1981; Weaver and Doster 1982:144) and the Waverly plantation community southwest of 22Lo741 in Clay County (Adams 1980). With the demise of the plantation system in the mid-nineteenth century and the expansion of steam power in the latter part of the nineteenth century, most of the industrial activity gradually shifted from a plantation and rural area focus into towns which functioned as central places (Weaver and Doster 1982:144). Sawmilling and cotton ginning, nonetheless, continued to be centered in the rural areas. This was particularly true for the cotton industry because of the need to reduce the bulk of the cotton for shipment. The sole large scale industrial center reported for the Upper Tombigbee Valley is the community of Bay Springs, the majority of the industrial activity being confined to a small scale with a concentration in the towns (Weaver and Doster 1982:145).

Weaver and Doster (1982) have discussed at length much of what is known about the nature of cotton ginning in the Upper Tombigbee Valley. They report that prior to the Civil War cotton ginning was primarily a plantation activity and that the typical cotton gin consisted of a two story structure (Weaver and Doster 1982:145). It is further noted that for the pre-Civil War period "little documentary evidence has been discovered with which to develop patterns of structure or location for

the early plantation based cotton gins in the Tombigbee River Multi-Resource District" (Weaver and Doster 1982:146). A survey of industrial sites indicated that there was no strong association with any one category of topography. The largest percentage (28.1%) were associated with levees, while the upland bluffs and bottomland knolls accounted for 18.8 percent and 15.6 percent of the associations, respectively. The remaining percentage were scattered among the other topographic categories in low frequencies (Weaver and Doster 1982:181). In addition to this, nearly half (46.9%) were located within 0.0 to 0.25 miles of navigable water. When this distance is increased to 2.5 miles, 71.9 percent of the industrial sites are included (Weaver and Doster 1982:182). While there is no clear association with specific topographic features, there is an association based on nearness to navigable water, one of the main transportation modes in the Upper Tombigbee Valley. Located on the edge of a terrace a mere 700 ft (0.10 mi) from the edge of the river, 22Lo741 fits this pattern well. Furthermore, the light industrial facility at the site is situated along a major roadway in the regional transportation network in close proximity to the central places of Colbert and Barton.

In comparison to the other industrial facilities investigated within the upper portions of the Tombigbee River Multi-Resource District 22Lo741 is unique. Comparative data relating to excavated cotton gins is highly restricted for this region. The cotton milling community of Bay Springs is known to have included a cotton gin along with other industrial and commercial facilities, which included a blacksmith shop, a grist mill, a sawmill, a cotton mill, and a general store (Adams 1981:32-33). Although a cotton gin was present in the community from its founding in 1836 throughout the active life of the community into the terminal portions of the nineteenth century, its location and the specifics of its configuration are not known. It appears that most of the cotton processed at the Bay Springs cotton mill arrived already partially cleaned and baled (Adams 1981).

The next instance of a description of a cotton ginning facility to be discussed here comes from the town of Aberdeen. In the 1850s the Becket family operated a cotton gin at Aberdeen. Weaver and Doster (1982: 146, 149) provide the following excerpt from Becket's description of the family's operation.

It consisted of two long brick buildings each about forty feet wide and separated by a driveway twenty feet which was bricked up at each large double gate at each end for ingress and egress.

In the south end of the west building was the workshop of Mr. Hays, who made all the patterns for molding; a place for finished castings; a place for the molds, and a place where the moldings was done; the blast furnace and stack, wherein the cast iron was melted; a blacksmith shop, and last, in the north end, a place for different parts of the gins before they were assembled in the complete gin.

In the other, or east building, was first the bookkeeper's office and general headquarters office, in the south end; also a space for the finished gins. There was an upper story, open at the front end, with no steps, but with a wide incline going up gradually so that gins and heavy materials could be carried up and down on trucks.

In the lower story, were the lathes for iron and steel, the blast fan for the molding stock, the emery wheels for finishing the front of the breast ribs for the gins, the dies for cutting the gin saw, etc., etc. On the right-hand side, including a brick offset, was the engine, flywheel, etc., and farther along, in the north end, a general store place.

While the Becket family operation was considerably larger and more complex than the facility at 22Lo741, it is important because it demonstrates the direct association of cotton gins and other industrial facilities, particularly a blacksmith/forging facility. It is very important to note that the blacksmith shop and the cotton gin at this facility were located in separate but contiguous buildings; a much different arrangement than the one present at 22Lo741.

The final body of comparative material to be discussed here is derived from the excavations carried out at the Waverly plantation (Adams 1980). These excavations once again stress the uniqueness of 22Lo741, not through the similarities between the two sites, but rather through their differences. Excavations at Waverly revealed the existence of a tenant farming community that included a small industrial complex spanning the period between 1841 and the early decades of the twentieth century (Adams 1980). Of specific interest here is the small industrial complex associated with the plantation. In 1841 Colonel George Young established a home at Waverly along with a cotton gin, a grist mill, and a warehouse; adding a saw mill in 1845 (Adams 1980:3). All of these facilities were grouped together on a bluff overlooking the Tombigbee River and apparently were operated by a common source of steam power. Adams (1980:3-4) provides documentary evidence that the centralized steam power generator was in place at least by 1842. While much of the industrial facility was destroyed by fire in 1878, it was quickly rebuilt and back in operation by 1880 (Adams 1980:241). The cotton gin is known to have been in operation until at least 1907 (Adams 1980:242).

The three industrial sites investigated at the Waverly community include the brick cotton warehouse (22C1572), the mill complex (22C1575), and the brick kiln (22C1521). Of these, only the mill complex (22C1575) is of relevance here. As noted above, the mill complex was composed of a steam powered cotton gin, grist mill, and saw mill. The comparative value of this site to the remains exposed at 22Lo741 is somewhat restricted as



this site represents the power source for the sawmill, grist mill, and cotton gin owned by George H. Young. Most of the machinery for these operations apparently was located to the south of our excavations, in the area mined for gravel (Adams 1980:241).

Its value is further restricted by an apparently low density of non-brick artifacts and a general paucity of artifacts attributable to an industrial context of utilization. Adams' (1980:563) Class F09 encompasses industrial artifacts, of which only 12 were recovered, all of which consist of complete and fragmentary iron grates for boilers.

The structural remains of the mill complex at Waverly have been divided into four phases of construction. The first, and most important here, spans the period from the 1840s to the fire of 1878. The second covers the post-fire period, while the third and fourth phases cover the period during which that area was used as the site of the ferry tender's house (ca. 1911 to 1961) (Adams 1980:247). Six features were assigned to the first construction phase. These structural features bear very little resemblance to those uncovered at 22Lo741. Feature A consisted of a rectangular (6.0 m by 3.6 m) brick structure built using the American bond pattern typical of the early nineteenth century (Adams 1980:250). Adams (1980:250) considers Feature A to be "the original location of the boiler for the steam engine" with the firebox located "on the southern end and the boiler...supported above the brick foundation." This designation was based on the presence of several large pieces of boiler plate and information derived from the oral testimony of Honeybee Hendrix (Adams 1980:237, 239, 250). There was no comparable structural feature at 22Lo741.

Features B and C were brick walls of unidentified function due to their highly fragmentary condition. Adams (1980:251) speculates that Feature C may have been part of the water reservoir for the boiler. Adjacent to, but not bonded to Feature C, was Feature D, a t-shaped support feature. The item which Feature D supported is unknown. Again, no comparable structural features were recovered at 22Lo741.

The structural features associated with the first phase of construction which do bear resemblance, albeit very superficial, to structural features exposed at 22Lo741 are those designated as Features F, G, H, and I. This group of features forms a series of overlapping solid brick platforms. Feature F, stratigraphically the lowest member of the group, was not entirely exposed, and its extent and function remains enigmatic (Adams 1980:252). Overlying most of Feature F was Feature G, "a massive brick platform that served as a foundation for some piece of heavy machinery" (Adams 1980:252). This feature and Features H and I all belong with the second phase of construction (Adams 1980:252-253). Adams (1980:253) considers Features F, G, H, and I to represent the life history of the steam engine platform.

The only structural remains exposed at 22Lo741 which even remotely resembled the structural remains at 22C1575 was Feature 7. Both Feature 7 (22Lo741) and Features F, G, H, and I (22C1575) are brick platforms. The resemblance ends here. Feature 7 is a small rectangular brick platform (2.53 m by 2.0 m) seven vertical courses high, with each course stepped in slightly. The platform complex at 22C1575 was much larger and the courses of brick were not stepped in. Functionally, these two platforms are very different. As noted previously, the platform complex at 22C1575 is considered to have functioned as the platform upon which the steam engine rested. On the other hand, it has been postulated that the brick platform at 22Lo741 functioned as the location for a heavy piece of equipment, specifically, the cotton press. While this designation is speculative, it is clear that it did not function to support a steam engine. There was absolutely no indication that steam ever served as the source of power at 22Lo741.

The light industrial facility excavated at 22Lo741 is truly unique among the industrial sites excavated in the Upper Tombigbee Valley. Documentary and archaeological data for the region indicate that cotton gins and other light industrial facilities tended to be associated with plantations and large farms during the pre-Civil War period. The facility at 22Lo741 deviated from this pattern and thus represents a previously poorly recorded facet of industrial activity in the Tombigbee River Multi-Resource District. This facility, however, was not an isolated structure as it was located in close proximity to the towns of Colbert and Barton, and its viability appears to have been tied to the needs of the population in the area. As a smith/forge the site was able to provide repair facilities and a locale for the manufacture of small items such as nails and wedges. Its function as a repair facility was supplemented at harvest time by the presence of a cotton gin at the site. The excavation of 22Lo741 has broadened our scope of knowledge of industrial activity in the Tombigbee River Multi-Resource District and of the development of the historic communities of Colbert and Barton.

APPENDIX 1  
UNIT DESCRIPTIONS

Unit 1 (S10.98 W9.46)

- General Description: Unit 1, a 1 m square oriented 14° west of North, was one of the initial four units excavated during the survey phase of the project (Hambacher 1982). Its placement was designed to aid the determination of site size, integrity, and depositional sequence at 22Lo741. Lying a short distance north of the structure (Figure 3), Unit 1 was largely subsumed by Unit 8 (S12 W8) during the excavation phase.
- Level 1: The surface was essentially horizontal and covered with a thin (less than 3 cm) Level 1. Level 1 was swept away and discarded without screening.
- Level 2: Fairly consistent in depth and constitution throughout the unit, ranging from 23-25 cm thick. Color and texture were the typical intermixture of yellowish brown (10YR5/5) and brown (10YR4/3) silty sands and sandy loams. This level was clearly disturbed redeposited soil and therefore was not screened. No cultural material was recovered.
- Level 3: Nearly sterile and of the typical very dark grayish brown (10YR3/2) sandy loam. This level was horizontal and uniform in composition across the unit, ranging from 10-12 cm thick. This level represents the pre-1980 A1 soil horizon outside of the structure. There was a minor amount of small brick fragments. This level was screened.
- Level 4a: Not present.
- Level 4b: Consisted of the typical dark brown to brown (10YR4/3) fine silty sand. It was uniform in both composition and thickness (20-25 cm) across the unit. This was the only stratum in the unit to produce cultural material of any quantity, including small brick fragments, ceramics, and metal (see Appendix 2).
- Level 5: Typical in color and texture, consisting of a dark yellowish brown (10YR4/4) fine sand. It was the basal level of the unit, and excavation was terminated 10 cm below the upper surface of the level. Excavation was terminated at a depth of 64 cm below the northeastern stake.

Unit 2(S15.14 W5.90)

- General                      Unit 2 was a 1 m square oriented 180° west of North.
- Description:            It is the second of the initial four test units excavated during the survey phase and is located east of the structure near the eastern edge of the small bench on which the site sits (Figure 3). During the excavation phase, Unit 15 (S16 W4) subsumed most of Unit 2.
- Level 1:                    The surface was highly undulating in an east-west direction. The northern edge of the bulldozer cut ran through the center of the unit from east-west and dropped sharply 28 cm in height. Level 1 was present in scattered, isolated patches and was swept off the unit without screening. All of the artifacts were recovered from the surface.
- Level 2:                    This level was 50 cm thick and consisted of the typical intermixed, variously colored sands and clays found in this stratum. The matrix of Level 2 was consistent and uniform throughout the unit. The base of the level undulates gently in a north-south direction. Except for charcoal flecking and a minor amount of brick fragments, the level was devoid of cultural material. It was not screened.
- Level 3:                    Consisted of the typical very dark grayish brown (10YR3/2) sandy loam found across the site. The level was thin (2-5 cm) but uniform in composition and sloped gradually from south to north. There were a few small brick fragments. The upper portions of this level appear to have been truncated.
- Level 4a:                    Not present.
- Level 4b:                    Typical in color and texture, consisting of a dark yellowish brown (10YR4/4) to yellowish brown (10YR5/4) fine silty sand. Excavation was terminated 10 cm into the level because of a general lack of artifactual remains (see Appendix 2). The unit was terminated at a depth of 62 cm below the northeast stake.

Unit 3 (S20.80 W6.40)

- General                      Unit 3 was the third of the initial four test units excavated during the survey phase and was a rectangular trench 7.5 m long (N/S) and varying in width from 0.9 m (E/W) at the northern end to 1.5 m (E/W) in the central and southern sections. The asymmetry of
- Description:

the unit resulted from several factors. First, the testing strategy required a rapid determination of the north/south dimensions of the structure as a whole and specifically of the brick foundation. The quickest means to achieve this was to clean the approximately 5 m long depression created when heavy equipment uncovered the east wall of the structure. The southern end of this cut was very unclear and just merged with the crest of the bench. The irregularity of this depression and the lack of a systematic grid during the survey phase also contributed to the asymmetry of the unit. Oriented 10° west of North, this unit was laid out with a hand-held compass (Figure 3). Since bulldozers had disturbed most of the area covered by the unit, profiles were obtainable only in the northern 2 m of the unit. Appendix 2 lists artifacts recovered from this unit.

- Level 1: Mostly removed by heavy machinery.
- Level 2: Although heavy machinery also removed most of this level, it was extant in the northern 2 m of the unit and consisted of the typical interdigitated and intermixed dark brown (10YR3/3), dark yellowish brown (10YR4/4), and yellowish brown (10YR4/5) sands and clays. The stratum was 28 cm thick and uniform in color and composition. Level 2 contained no cultural material and was not screened.
- Level 3: Also mostly removed before excavation. As with Level 2, Level 3 was present north of the bulldozer cut. It was typical in color and texture, consisting of a very dark grayish brown (10YR3/2) to dark grayish brown (10YR4/2) sandy loam. The level was 10 cm thick and uniform throughout its extent and contained a few brick fragments.
- Level 4a: Lay immediately at the surface over most of the unit and contained the intact remains of a brick and wooden foundation. This level underlay Level 3 where Level 3 was present. It was excavated only to the extent required to clarify and expose the edges of the foundation (approximately 6-10 cm). For most of its length, Unit 3 straddled the builder's trench associated with the foundation (Feature 1). During the testing phase of excavation, three areas were arbitrarily defined along the western edge of the foundation.

Area 1: Found in the northern 2.4 m of the unit, north of the edge of the bulldozer cut, this area was largely composed of the burned section of Feature 1. West of this was mottled light yellowish brown (10YR6/4) and yellowish brown (10YR5/4) fine sand. All of the artifacts recovered from Area 1 came from the thin zone of charcoal extending along the edge of Feature 1; the light yellowish brown sand was sterile.

Area 2: Located in the central section of Unit 3, it runs from the southern edge of Area 1 southward 2 m to the beginning of the in situ portions of the brick foundation line. This area was a highly mottled dark brown (10YR3/3) and dark yellowish brown (10YR4/4) fine silty sand. Artifacts were scattered throughout the matrix; there were no concentrations.

Area 3: In the southern 3.5 m of the unit, west of the brick foundation. Later excavation revealed that Area 3 lay entirely within the builder's trench associated with Feature 1. The matrix was composed of a dark brown (10YR3/3) fine sand. Artifacts were scattered across the entire length of the area (see Appendix 2). Fragments of an Old Blue transfer printed pearlware plate (Vessel 4) were concentrated in an oval area (90 cm N/S by 64 cm E/W) in the extreme southern end of the builder's trench.

Level 4b: Not encountered.

Level 5: Encountered only at the extreme southern end of the unit, south of the southern end of Feature 1. It consisted of the typical yellowish brown (10YR5/4) fine silty sand and was devoid of cultural materials.

#### Unit 4 (S15.92 W8.28)

General Description: Unit 4 was the fourth and last of the initial test units excavated during the survey phase. It was rectangular (1.8 m E/W by .94 m N/S) and located 1.3 m south of the northwest corner of Unit 3 (Figure 3) extending westward from and perpendicular to Unit 3. Unit 4 was opened up to follow an east-west trending foundation line. Units 9 (S16 W10) and 11 (S16 W8) later subsumed this area.

Level 1: The surface of the unit was flat. Level 1 was not present.

- Level 2: Typical in color and composition, this horizon tapered eastward from 46-48 cm thick at the west end to 17 cm thick at the east end; it also dipped slightly in the northwest corner. No cultural material was recovered. The level was not screened.
- Level 3: Darker than usual, consisting of a black (10YR2/1) sandy clay loam with a large amount of small brick fragments and some charcoal flecking. The level is uniform in composition. It was 4-6 cm thick. Although it dipped slightly in the northwest corner, the level otherwise lay horizontally. Level 3 was screened.
- Level 4a: Represented the basal level of this unit. To expose the edge of Feature 1--North Wall, approximately 6 cm were removed. At termination, the unit floor revealed the southern 36 cm of Feature 1--North Wall paralleling the northern wall of the unit. South of this there was a yellowish brown (10YR5/4) fine silty sand mottled with patches of a light yellowish brown (10YR6/4) fine silty sand. Later excavation demonstrated that this zone was the base of the light yellowish brown sand fill present throughout the northern half of the site. All of the artifacts from Level 4a were recovered from the Level 3/4a interface over Feature 1 and from the charcoal zone along the edge of Feature 1 (see Appendix 2).
- Level 4b: Not encountered. Excavation was terminated 50 cm below ground surface.

#### Unit 5 (S4 W2)

- General Description: Unit 5 was a 2 m square located 9.2 m northeast of the structure, approximately one-third of the way up the edge of the Holocene terrace (Figure 3). The unit sloped 10° from east to west.
- Level 1: The surface of the unit undulated with several bulldozer tread impressions running north to south. Level 1, which was present only in the form of isolated dried clumps of soil, was discarded.
- Level 2: The entire unit was disturbed, consisting solely of the redeposited sands and clays comprising Level 2. Excavation was carried to a depth of 35 cm below ground surface. At this depth, the floor of the unit exhibited mostly yellow (10YR7/8) clay with patches of redeposited, very dark grayish brown (10YR3/2) sand. Excavators probed the corners and center of

the unit with a 1 in. diameter soil tube probe to a depth of 25.5 cm below the base of excavation. There were no intact, undisturbed soils, so artifacts recovered from the unit (see Appendix) were all from a disturbed context. All of the soil was screened.

Unit 6 (S4 W8)

General

Description:

Unit 6 was a 2 m square located 10 m due north of the structure (Figure 3). The unit sloped slightly downward (approximately 7°) east to west.

Level 1:

The surface of the unit undulated gently. Level 1 was 5-8 cm thick across the unit and was discarded without screening.

Level 2:

Typical in color and texture and contained a minor amount of brick fragments. The horizon tapered east to west from a maximum of 24 cm thick to a minimum of 10 cm thick. The basal boundary was relatively horizontal but sported several intrusions into Levels 3 and 4 where roots were yanked out. Artifact density was low (see Appendix 2). The level was screened.

Level 3:

The initial clearing operations in the navigation channel truncated most of Level 3, although the central and northeastern quadrants contained intact portions. In the center, the grayish brown soil was only 2-3 cm thick, whereas along the north and east walls of the unit it was 6-8 cm thick. Soil color and texture of Level 3 differed slightly from the usual soil, consisting of dark grayish brown (10YR4/2) sand. This is attributed to the fact that only the basal portions of Level 3 were present. The base of the horizon dipped slightly from east to west. Artifact density was low (see Appendix 2).

Level 4:

Consisted of dark brown (10YR3/3) to dark yellowish brown (10YR4/4) silty sand, typical in color and texture for the area outside of the structure. The level tapers slightly from east to west from 22 cm to 10 cm thick. A linear lens of brownish yellow sand (10YR6/6) 40 cm wide (E/W) ran along the western one-third of the unit and extended the full length of the unit. Attributed to alluvial activity, this lens was a maximum of 22 cm thick and lay 30 cm below the ground surface. The sand lay directly on the Level 4/5 interface and appeared to be laminated. Artifact density was moderate (see Appendix 2).



Level 5: Consisted of the typical yellowish brown (10YR5/4) sand. Excavation was halted after 10 cm of this level was excavated because it was sterile. Excavation was terminated at a depth 26 cm below the southwest stake with a .8 m (E/W) by 2.0 m (N/S) window cut along the west wall to a depth of 56 cm below the southwest stake.

#### Unit 7 (S12 W2)

General Description: Unit 7 was a 2 m square located approximately 4.5 m east northeast of the structure (Figure 3). Lying about one-third of the way up the edge of the Holocene terrace, the unit sloped 10° east to west.

Level 1: The surface of the unit undulated with several bulldozer tread impressions running north-south. Level 1 was 2-3 cm thick and was discarded without screening. It contained several brick fragments.

Level 2: Atypical in color and texture, consisting of dark brown (10YR3/3) sandy loam with patches of yellowish brown (10YR5/4) sands and clays intermixed. The stratum persisted in this manner for 10 cm and then gave way to a yellowish brown (10YR5/6) clay. Excavation was terminated after 10 cm of this clay had been excavated. Because of the extreme hardness of the soil, coring of the unit floor was not possible. Artifact density was very low (see Appendix 2). Excavation was terminated 22 cm below the surface.

#### Unit 8 (S12 W8)

General Description: Unit 8 was a heavily disturbed 2 m square less than 2 m due north of the structure (Figure 3). The northwestern two-thirds overlapped with Unit 1.

Level 1: The surface was roughly even and sloped slightly (approximately 5°) from south to north. Level 1 was present only in small pockets of the surface. A few artifacts were recovered (see Appendix 2).

Level 2: Typical in both color and texture. The stratum had a uniform composition across the unit. It tapered slightly in thickness from southeast (34 cm) to northwest (12 cm). The lower boundary was horizontal. Although the level was not screened, a few artifacts were recovered (see Appendix 2).

Level 3: A totally disturbed level consisting of intermixed, convoluted lenses and patches of very dark grayish brown (10YR4/1) sandy loam. At the top of the level, a cone shaped depression was encountered in the southwest corner. This area was originally designated as Feature 3. Excavation revealed it to be a hole from the removal of a large tree. The level ranged from 24 cm thick at the northern end of the unit to 36 cm thick at the southern end. The lower boundary dipped from north to south.

Level 4a: Not present.

Level 4b: Also appeared to be moderately disturbed in its upper portions. It was typical, consisting of dark yellowish brown (10YR4/6) fine silty sand. Excavation was terminated 20-25 cm into this level because of a paucity of artifacts (see Appendix 2). This was the base of level 4b.

Level 5: Not penetrated more than several centimeters. Excavation was terminated at a depth of 86 cm below the southwestern stake.

#### Unit 9 (S16 W10)

General Description: Unit 9 was a 2 m square in the northwestern portion of the structure (Figures 3 and 22). The western 28 cm of Unit 4 (S15.92 W8.28) protruded into the southwestern quadrant.

Level 1: The surface was fairly even and sloped slightly from east to west, dropping 22 cm across the unit. Level 1 was present only in small isolated patches. It was discarded without screening.

Level 2: Typical in color and texture. In the southern half of the unit, Level 2 tapered from 32 cm thick at the eastern end to 20 cm thick at the western end; it was thicker and slightly more uniform in the northern half of the unit. In the northeastern quadrant, Level 2 was 50 cm thick while in the northwest corner, the base of Level 2 dipped to 58 cm thick. This dip was due to the presence of Feature 9 below Level 3, where the feature had slumped in. Otherwise, the base of level 2 was relatively horizontal.

Level 3: Also typical in color and composition. The level was uniform in thickness, measuring between 8 cm and 10 cm thick. Boundaries were horizontal except in the northwestern quadrant over Feature 9. Level 3 was 30 cm thick in this area.

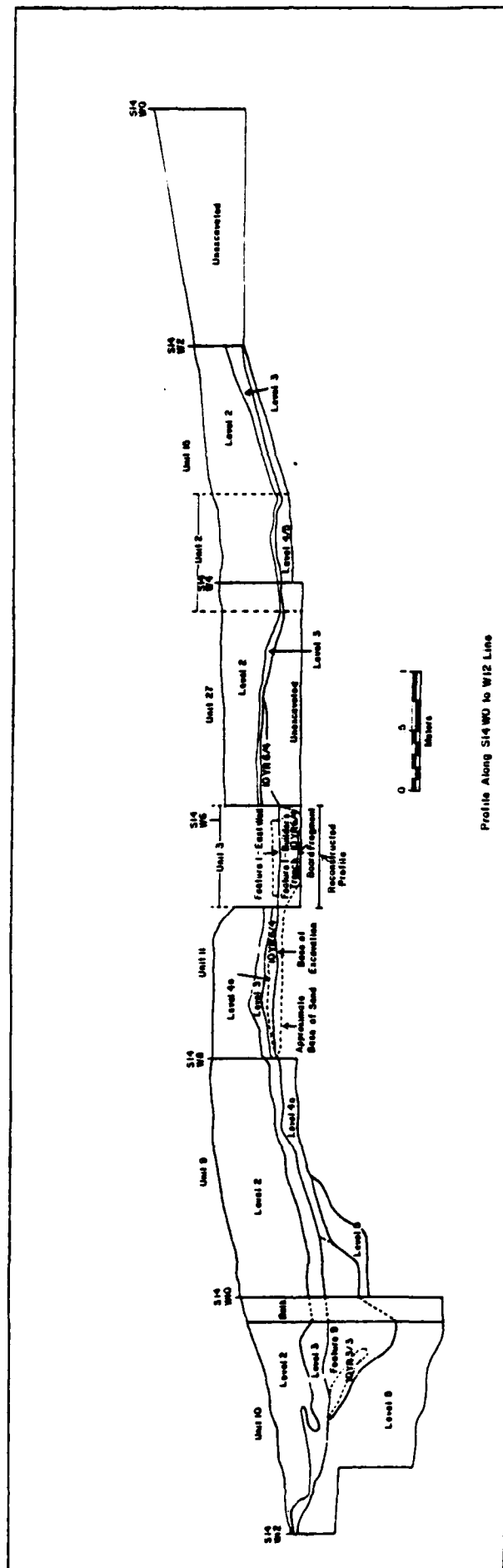


Figure 22. Profile along S14 W0-W12 line.

Level 4:

Levels 4a and 4b were merged in this unit. The matrix was a dark brown (10YR3/3) fine silty sand mottled with a small amount of very dark gray (10YR3/1) sand. By the time the excavation had reached this level, the depression in the northwestern quadrant of the unit had expanded to a semi-circle extending from the northeast corner to the southwest corner of the unit. After removing the first 10 cm of Level 4, the western end of Feature 1--North Wall and the associated light yellowish brown sand were exposed. Feature 1 extended westward 40 cm into the northern portion of the southeast quadrant. The light yellowish brown (10YR6/4) sand was present on both sides of the feature. On the northern side, it paralleled Feature 1 and tapered from 25 cm to 8 cm in width (N/S) at the western end of Feature 1. The sand was thin (2 cm) in this area. South of Feature 1, the sand was thicker, measuring up to 5 cm thick, covering the entire floor of the unit south of the feature and extending as far west as Feature 1. These two cultural features are thinnest along their western extent. It appears that the slumping of Feature 9 disturbed a portion of Feature 1. In the narrow band between the slumped edge of Feature 9 and Feature 1, Level 4 was 16-20 cm thick. Once this was removed, the extreme southeastern corner of Feature 9 was exposed; it covered an area 40 cm (N/S) by 38 cm (E/W). The feature was only 16 cm deep in this unit.

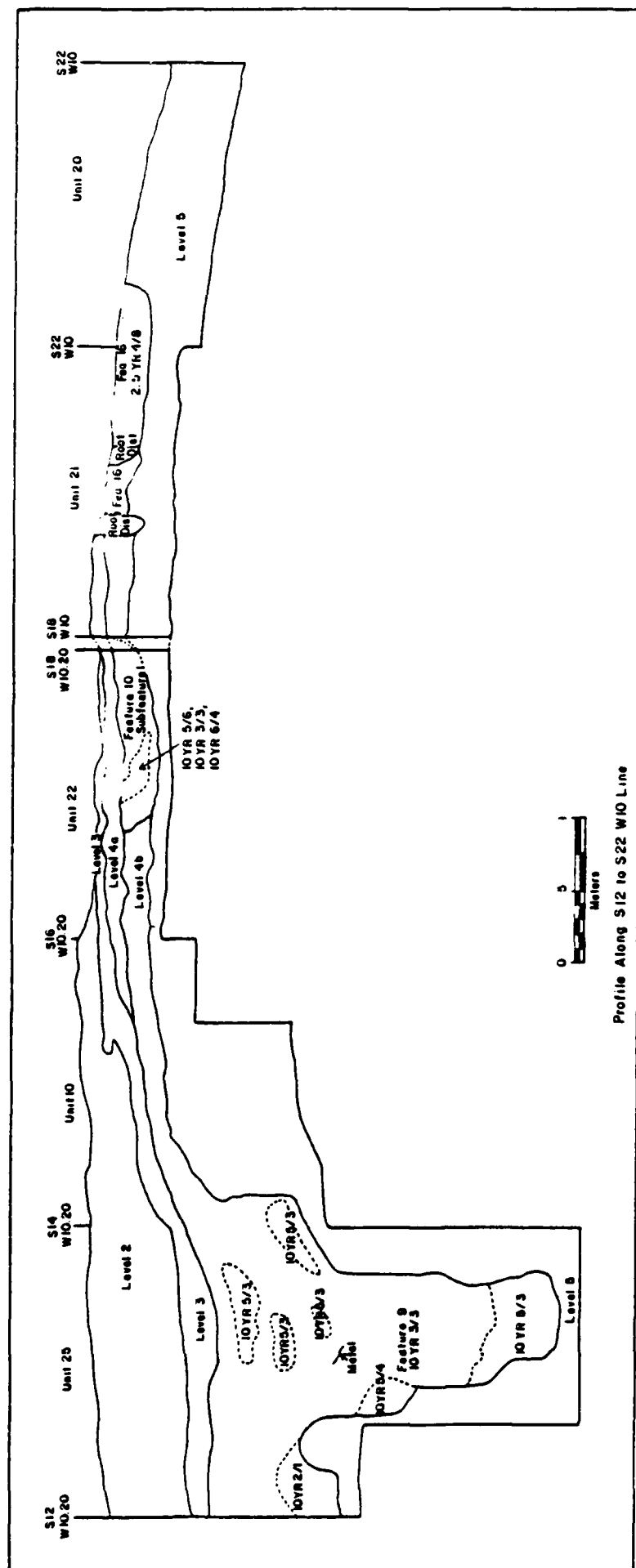
Level 5:

Also typical, consisting of a yellowish brown sand. Excavators penetrated it only along the north and west walls of the unit in order to expose the profile of Feature 9. Excavation was terminated at the top of the level in the rest of the unit. A depth of 40 cm below the stake was reached over most of the unit before excavation was terminated. Slit trenches .50 m wide were excavated to a depth of 1.1 m below the southwest stake along the north and west walls. See the Appendix 2 for a list of artifacts recovered from Unit 9.

Unit 10 (S16 W12)

General  
Description:

Unit 10 was a 2 m square located along the northwestern edge of the site (Figures 3 and 23) and 70 cm due east of the erosional ravine forming the effective western limit of the site. Unit 10 lies immediately adjacent to the west side of Unit 9.



**Figure 23. Profile along S12-S22 W10 line.**

- Level 1: Virtually nonexistent. The surface was fairly uneven and sloped southwestward, dropping 45 cm from east to west (15° slope).
- Level 2: Typical in both color and composition. Thickness varied across the unit with the thickest portion located in the northeast corner (50 cm) and tapering to a thickness of 16 cm in the southeast and 5 cm in the northwest corners, respectively. The base of the level dipped to the northeast quadrant overlying Feature 9. Although the level was not screened, a small amount of cultural material was recovered (see Appendix 2).
- Level 3: Typical in color and composition. This level was not present along the western 25-30 cm of the unit, where it had been truncated by heavy machinery. The surface of Level 3 was undulating and contained a number of pockmarks where roots had been torn out. Like Level 2, Level 3 also dipped 40 cm in the northeast quadrant overlying Feature 9. The level was 10 cm thick except in the northeast quadrant where it ranged between 16 cm and 20 cm thick. After removing Level 3, the extent of the depression associated with Feature 9 became clear. It was L-shaped and began at a point 42 cm north of the southeast corner and extended to an east/west width of 72 cm. Continuing northward with a slight eastward dip to a point 40 cm south of the unit's north wall, it turned westward and curved into the unit's north wall 40 cm east of the northwest corner.
- Level 4: Slightly lighter in color than usual, consisting of a dark yellowish brown (10YR4/4) sand. Levels 4a and 4b were indistinguishable in this unit. As with Level 3, Level 4 had been truncated in the western 40 cm of the unit. Also, it was not present in any quantity in the northwest quadrant of the unit. In this area, Level 5 lay directly beneath Level 3. Level 4 was generally 20 cm thick, tapering down to 10 cm thick in the southwest quadrant and the central portion of the unit. In the northeast quadrant, Level 4 gradually thickened until it merged with the fill of Feature 9. The base of Level 4 lay roughly horizontal. Artifact density was low. After removal of Level 4, three zones of discoloration were defined: Feature 9, Area 1, and Area 2.

Feature 9: Located in the northeast quadrant, only the extreme southwestern corner of the feature was present, extending 50 cm south and 50 cm west of the northeast stake. It was 60 cm deep (1.25 m below the northeast stake). The edge of the feature formed an arc.

Area 1: Appeared 6 cm below the southwest stake and consisted of an oval (72 cm N/S by 56 cm E/W) discoloration. The matrix was a dark grayish brown (10YR4/2) sand that graded into a dark brown (10YR4/3) sand after 5 cm. Originally, excavators believed this area to be a possible postmold but after cross sectioning, it became apparent that it was a root mold. The area bottomed out 66 cm below the southwest stake. It produced a minor amount of artifacts, most of which are prehistoric (see Appendix 2).

Area 2: Consisted of the northwestern extension of the depression associated with Feature 9. After it was cross sectioned, the area proved to be nothing more than a low spot in Level 4.

Level 5: The excavation was carried approximately 30 cm into Level 5, which consisted of the usual yellowish brown sand. In the area surrounding Feature 9 and its associated depression, excavation continued until at least 30 cm of Level 5 showed in the profile. Over most of the unit, excavation was terminated approximately 40 cm below the southwest stake. In the northeast quadrant, excavation was terminated at 1.42 m below the southwest stake.

#### Unit 11 (S16 W8)

General Description: Unit 11 was a 2 m square located in the north-central portion of the site (Figures 3 and 22) and lying immediately east of Unit 9. Most of Unit 1 had been excavated previously (Unit 4 and a portion of Unit 3), so only an area 1.22 m (E/W) by 0.88 m (N/S) along the north wall and an area 15 cm (N/S) along the south wall remained unexcavated when the unit was staked out. The unexcavated area along the south wall was left to serve as a balk. Except for the account of Level 4, the following description pertains only to the unexcavated area along the north wall.

- Level 1: Not present. The surface of the unexcavated area was horizontal.
- Level 2: Typical in color and texture and 42 cm thick. The base was relatively horizontal, with one small hump appearing in the center. Although the level was not screened, a few artifacts were recovered (see Appendix 2).
- Level 3: Consisted of the usual very dark grayish brown soil that was 10 cm thick. The horizon surface lay roughly horizontal, with a small hump 10 cm high in the center. It also sloped slightly downward (ca. 10 cm) to the north.
- Level 4a: It was necessary to remove 4-6 cm of this dark brown (10YR3/3) level in order to expose the northern edge of Feature 1--North Wall and the associated light yellowish brown sand fill. An additional 4 cm were then removed to bring the level of the floor of Unit 11 even with the floors of Units 3 and 4. Level 4a had a low density of artifacts. At this depth (between 51 cm [east side] and 58 cm [west side] below the southwest stake), the floor of the entire unit exhibited the remains of Feature 1 and the associated sand fill. Feature 1--North Wall extended roughly east/west through the center of the unit, and Feature 1--East Wall/Section B extended along the east wall. A light yellowish brown (10YR6/4) sand surrounded the foundation line on its north and south sides. There was a small, roughly semicircular zone (48 cm N/S by .50 cm E/W) of dark yellowish brown sand in the southwest corner of the unit that is considered to be a high spot in Level 5 protruding through the base of the light yellowish brown sand fill. Except for the removal of Feature 1, which involved approximately 4 cm of soil, excavation was terminated. Although time constraints prohibited the complete removal of the sand fill, coring showed that only 3-5 cm remained after removal of the wall. Those portions of the light yellowish brown sand fill that were removed were sterile. The depth of the unit at termination was 54 cm below the southwest stake. A more detailed description of the configuration and function of Feature 1 and the associated sand fill is presented below in sections concerning feature descriptions and the structural analysis of the site.
- Level 4b: Not excavated.



#### Unit 12 (S20 W4)

General Description: Unit 12 was a 2 m square located at the southern end of the easternmost north/south tier of units (Figures 3, 24, & 25) and lying immediately south of Unit 13. It was heavily disturbed during navigation channel clearing operations.

Level 1: The surface of the unit was relatively even and sloped westward, dropping 33 cm from the east to west sides of the unit. This area represented the eastern and leading edge of the bulldozer cut that exposed the foundation. Level 1 was present in scattered, thin patches and was discarded without screening.

Level 2: The unit was totally disturbed from ground surface to Level 5; Feature 7 was the only cultural phenomenon to remain even partially intact. The soil comprising Level 2 was typical in color and texture except for containing an extraordinarily large amount of brick fragments, which were derived from Feature 7. Feature 7 was located in the northern half of the unit. Above the feature, Level 2 was 36 cm thick at the north wall and 52 cm thick at the south end of the in situ portions of Feature 7. South of the feature, Level 2 was 74 cm thick. The disturbance in this unit effectively removed the southern edge of Feature 7 and any potential builder's trench that may have been associated with the feature.

Level 4: Completely removed before excavation.

Level 5: Lay directly beneath Level 2 and was typical in color and texture. At the top of the level, a sub-rectangular, dark grayish brown (10YR4/2) discoloration was exposed. It was assigned the designation of Feature 14. Eighteen centimeters of Level 5 were removed to insure its sterility. There were no artifacts. Excavation was terminated at a depth of 94 cm below the northeast corner. Appendix 2 lists artifacts recovered from Unit 12.

#### Unit 13 (S18 W6)

General Description: Unit 13 was a 2 m square in the center of the easternmost north/south tier of units (Figures 3, 24, and 26). It lay immediately north of Unit 12.

Level 1: The surface of the unit was very uneven, and its westward slope dropped 36 cm in height (approximately 10° slope). The area covered by the unit represented

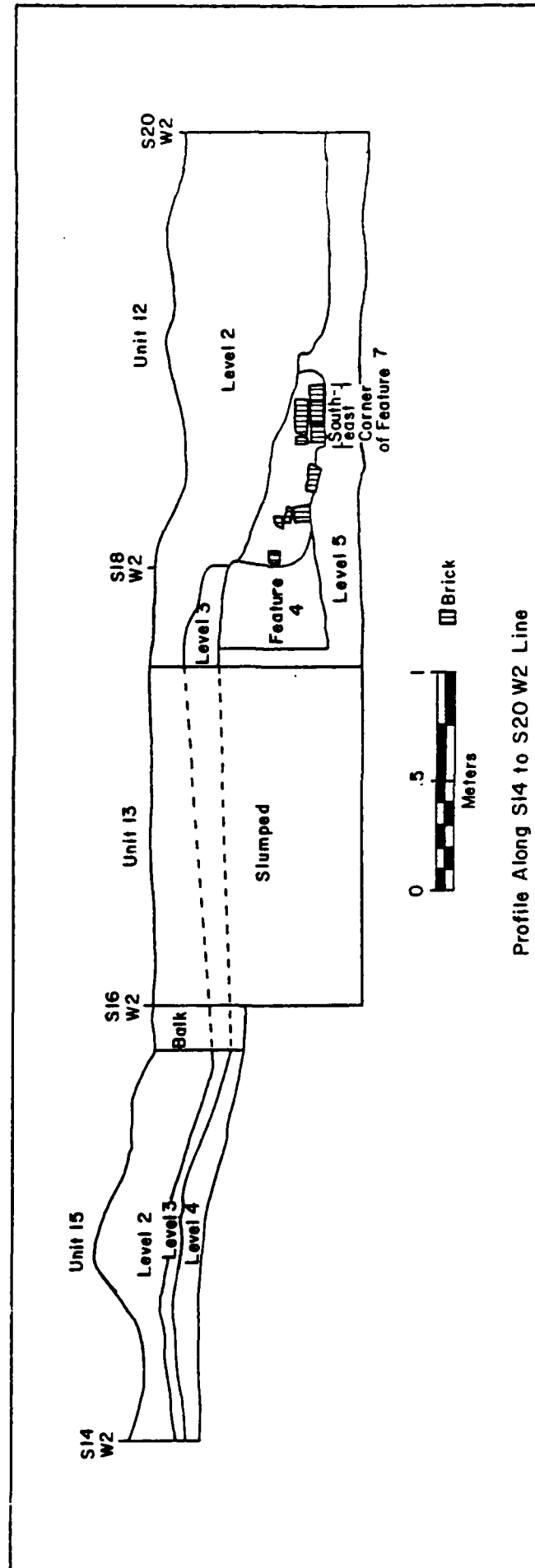


Figure 24. Profile along S14-S20 W2 line.

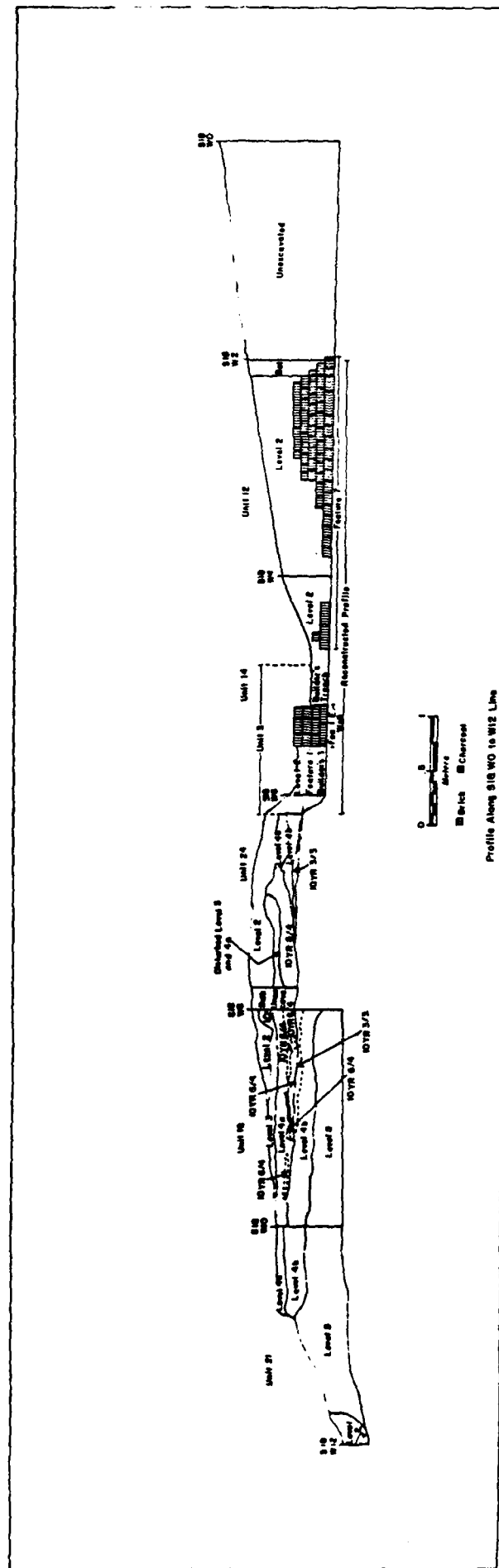


Figure 25. Profile along S18 W0-W12 line.

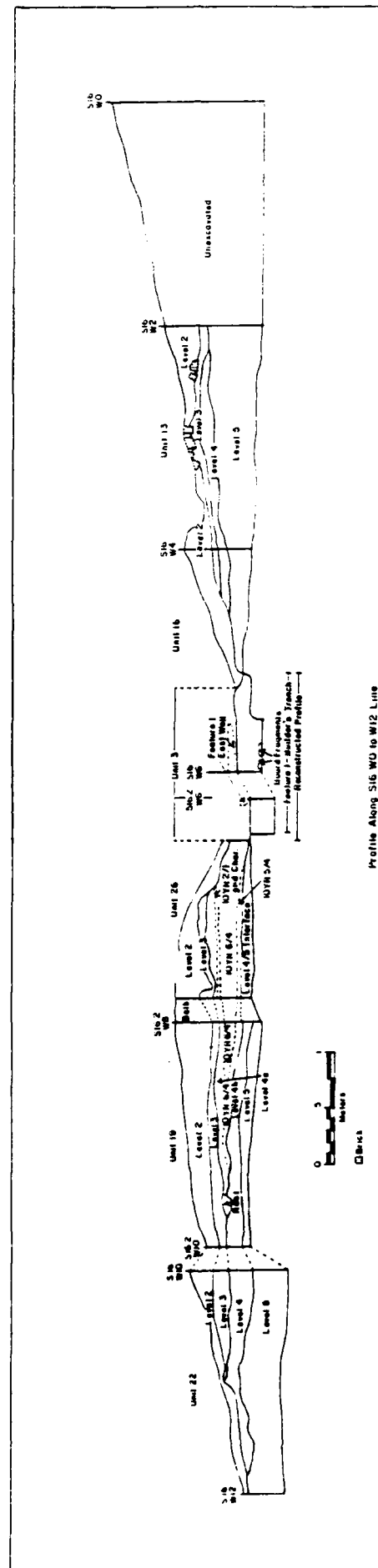


Figure 26. Profile along S16 W0-W12 line.

the eastern and leading edge of the bulldozer cut that originally exposed the foundation. Level 1 was present in scattered, thin patches and was discarded without screening.

Level 2: Typical in color and texture, it tapered from a maximum thickness of 28 cm in the unit's northeast quadrant to 6 cm along the western edge. The base of Level 2 lay relatively horizontal. It was not screened.

Level 3: Mostly truncated and removed before excavation. It was present in the northern third of the unit and extended along the unit's eastern wall before exiting the unit at a point 20 cm north of the southeast stake. It consisted of the usual very dark grayish brown (10YR4/2) soil. Level 3 was only 4-6 cm thick and lay horizontally. Feature 6 first became visible near the base of this level. The feature was a postmold located in the approximate center of the unit's northwestern quadrant.

Level 4a: Not present:

Level 4b: Directly under Level 3 where it was present and directly under Level 2 where Level 3 was absent. An additional three features were exposed in this level. Feature 4, consisting of the builder's trench associated with Feature 7, lay along the southern and western edges of Level 3; Feature 5 consisted of the crushed brick fill overlying Feature 7; and Feature 7 was a brick platform. The only area where Level 4 was not interrupted and replaced by a major structural feature was underneath Level 3. Here it consisted of a 10 cm thick yellowish brown to brown sand that lay horizontally and was devoid of cultural materials. See Appendix 2 for a list of artifacts recovered from Unit 13.

Level 5: In the northern third of the unit, Level 5 lay directly under Level 4. Elsewhere in the unit, it lay directly under Features 4 and 7. It was typical in color and texture. A maximum of 50 cm were removed in the northern third of the unit, and a minimum of 10 cm were removed from beneath Features 4 and 7. Excavation was terminated at a depth of 97 cm below the southeastern corner of the unit.

#### Unit 14 (S20 W6)

##### General

##### Description:

Unit 14 was a 2 m square located toward the southern end of the east-central north/south tier of units (Figures 3 and 25) and immediately north of Unit 28. Unit 14 subsumes a portion of Unit 3. A small area (20 cm E/W by 80 cm N/S) in the southwestern corner had not been previously excavated, as well as an area east of a line extending from the approximate center of the unit's north wall to 30 cm west of the southeastern corner.

##### Level 1:

The surface east of the area removed by Unit 3 was very hummocky and sloped from east to west. Level 1 was not present.

##### Level 2:

Approximately 10-15 cm thick, Level 2 was present in the eastern portion of the unit and consisted of jumbled, disarticulated brick fragments. In this area, Level 2 graded into the disturbance generated by nineteenth century salvaging operations at the site. Due to the compactness of the soil and the extensive nature of the disturbance it was not possible to accurately separate the two. This disturbance extended to the top of the basal course (Course 1) of bricks in Feature 7.

##### Level 3:

Not present.

##### Level 4:

Exhibited portions of Feature 1--East Wall and the associated builder's trench, Feature 7, and the fill of the builder's trench between Features 1 and 2. The western edge of the Feature 1-Builder's Trench extended northward from a point 34 cm east of the southwest stake until it exited through the unit's west wall 1.4 m north of the southwest stake. Feature 1--East Wall extended through the approximate center of the unit, and Feature 7 was in the eastern half of the unit's northeastern quadrant. The portion of Feature 7 connecting Feature 1 with the brick platform ran diagonally from southwest to northeast through the southeastern quadrant of the unit. Area 1 refers to the zone between these two lines of brick. After the removal of Feature 1, Feature 12, a postmold, was exposed. Because Level 4 was composed entirely of features and areas, distinction between Levels 4a and 4b was not made. The small area along the unit's western wall west of the builder's trench associated with Feature 1 consists of a grayish brown soil that has been identified as the original nineteenth century A1 soil horizon. This represents the transition between Levels 4a and

4b.

Level 5: Although all of Feature 1, its associated builder's trench, and Feature 7 were removed, Level 5 was not penetrated more than 5 cm. Excavation was terminated at a depth of 65 cm below grid stake S18 W8. See Appendix 2 for a list of artifacts recovered from Unit 14.

Unit 15 (S16 W4)

General Description: Unit 15 was a 2 m square located at the north end of the easternmost north/south tier of units. It lies immediately north of Unit 13 along the effective eastern boundary of the bench on which the site sits. A large portion of Unit 2, which had been previously excavated, was located in the northwest quadrant of Unit 15 (Figures 3, 22, and 24).

Level 1: Bearing the impressions of bulldozer treads, the surface undulated from east to west and also sloped, dropping 50 cm from the east side to the west side (approximately 15° slope). Level 1 was present only in the form of a few isolated, dried clumps of soil.

Level 2: Fairly typical in color and composition. Thickness varied greatly from a maximum of 32 cm in the south-central portion of the unit to a minimum of 1-2 cm along the western edge. The stratum tapered from east to west, and its lower boundary conformed to the surface of Level 3. Although a few artifacts were recovered (see Appendix 2), the level was not screened.

Level 3: Typical in color and texture, consisting of a dark grayish brown (10YR4/2) sand to sandy loam. This stratum had a relatively uniform thickness ranging between 4 cm and 6 cm. The surface of the level was undulating and tended to slope from east to west, the southwest side dropping some 23 cm in height across the unit (approximately 5°-8°). The base of Level 3 paralleled its upper surface. Most of the upper portions of the level had been truncated before excavation.

Level 4a: Not present.

Level 4b: Slightly lighter in color than usual, consisting of a dark yellowish brown (10YR4/6) fine silty sand.

Excavation was carried 10 cm into this level, where it was terminated because of a lack of artifactual remains and structural features. This coincided with the interface between Levels 4b and 5. The final depth of the unit at termination was 44 cm below the southeast stake.

#### Unit 16 (S18 W6)

##### General

##### Description:

Unit 16 was a 2 m square in the center of the east-central north/south tier of units (Figures 3 and 26) that lay between Units 13 and 26, straddling the eastern wall of the structure. The western half of the unit contained the leading edge of the original bulldozer cut.

##### Level 1:

The surface of the unit sloped steeply (approximately 20° slope) from east to west, dropping 45 cm in height over a distance of 1 m; it then leveled off at the floor of Unit 3. The western half of the unit was excavated first, and Level 1 formed a thin discontinuous mantle over this portion of the unit.

##### Level 2:

Darker than usual, consisting of a yellowish brown (10YR5/4) and dark yellowish brown (10YR4/4) silty sand. Level 2 covered the entire eastern half of the unit and ranged from 18 cm thick at its eastern end to 8 cm thick at its western terminus. The lower boundary sloped and was slightly dish shaped.

##### Level 3:

Severely impacted before excavation. Only the basal 4 cm were present and even then only as a thin band 40 cm wide (E/W) and 76 cm long (N/S) in the northeast quadrant. It consisted of a very dark grayish brown (10YR3/2) silty sand.

##### Level 4a:

Formed the main floor of the unit on which a number of structural features were observed. Three major structural features joined in this unit. The northwest corner of Feature 7 was in the unit's southeast quadrant, and the brick portion of Feature 1 was in the center of the unit's southwest quadrant. Along the southwestern edge of the unit there was a short line of bricks 50 cm wide (N/S) with their long axes oriented east-west. North of this, Feature 1 consisted of the rubble of a wooden, rather than brick, wall. The builder's trenches associated with these two features also met in the center of the unit. Feature 4, the builder's trench associated with Feature 7, had a yellowish brown (10YR5/6) silty sand matrix, while the matrix associated with the northern half of Feature 1 was a dark yellowish brown



(10YR4/6) silty sand. The northeast quadrant of the unit exhibited soil typical of Level 4, a dark brown (10YR3/3) silty sand.

After mapping, the floor of the unit in the area outside of the structure was excavated to the base of Feature 7 to fully expose the coursed brick. This process completely removed the builder's trench associated with it and required the removal of 18 cm of soil. But the builder's trench associated with Feature 1 persisted and changed its internal morphology slightly but maintained its shape. After the removal of the initial 10 cm, the yellowish brown (10YR5/4) cap in the feature gave way to Feature 15, which is a square post hole located at the southern terminus of the wooden section of Feature 1 and the associated builder's trench. The fill of the feature was a very light yellowish brown (10YR7/6) fine sand. North of Feature 15, the matrix of the builder's trench shifted to a dark brown (10YR3/3) silty sand mottled with patches of yellowish brown silty sand. Artifact density was low (see Appendix 2).

Level 4b: Not defined.

Level 5: A yellowish brown (10YR5/6) silty sand containing all Unit 16 features. Excavation was terminated at a depth of 60 cm below the unit's datum (southeast corner).

#### Unit 17 (S22 10)

General Description: Unit 17 was a 2 m square located at the southern end of the west-central tier of units (Figures 3, 27, and 28). It lay along the effective southern boundary of the site immediately east of Unit 21 and was extensively disturbed.

Level 1: The surface was very hummocky and sloped to the west-southwest, dropping 60 cm in height between the northeast and southeast corners (approximately 18°-20° slope). At the surface, portions of Levels 2, 4, and 5 and Features 8 and 16 were exposed. Level 1 was present only in small shallow pockets of the unit's surface.

Level 2: Covered most of the southern half of the unit and extended north through the center of the unit's northwest quadrant. This was later shown to conform to the area south and west of the edges of Feature 1-South Wall. The level consisted of the usual intermixed sands and clays of various colors, and it ranged in thickness from a maximum of 22 cm thick in

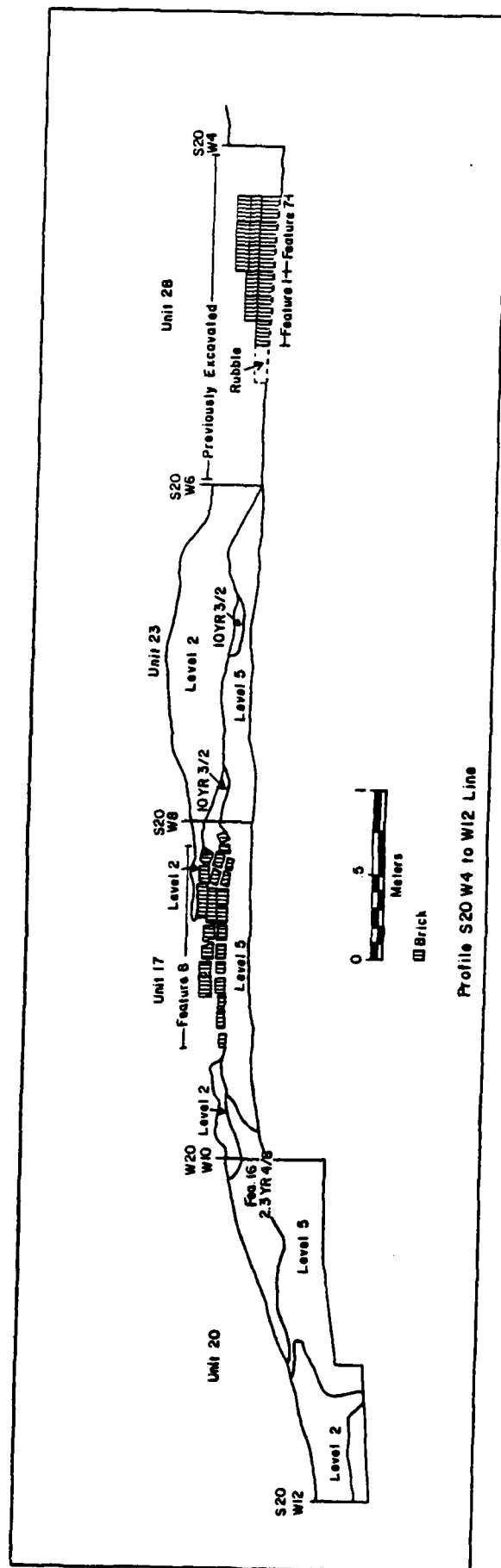


Figure 27. Profile along S20 W4-W12 line.

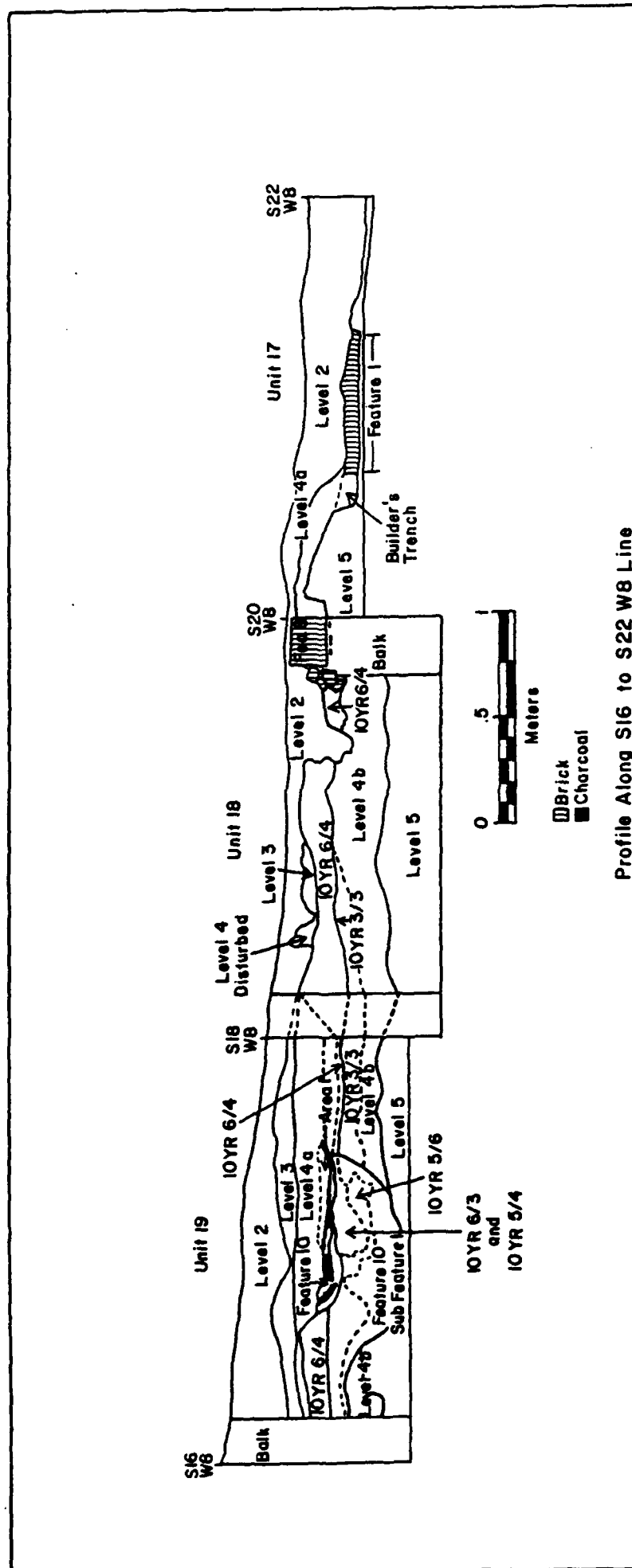


Figure 28. Profile along S16-S22 W8 line.

the area south of Feature 1 to a minimum of 12 cm thick directly over the feature and 4 cm thick north of the feature. The lower boundary of the level lay horizontally. In the northern half of the unit, Level 4 and Features 8 and 16 were exposed at the surface. Feature 8, a line of bricks, was located along the eastern 1.4 m of the unit's north wall. The feature was oriented 12° north of East and its western end penetrated 32 cm south into the unit. The western end of Feature 1--South Wall extended through the approximate center of the unit. Entering the unit between 70 cm and 1 m south of the northeast stake, it was 1.44 m long, 28 cm wide, and oriented 12° north of East. It consisted of a heavily disturbed single vertical course of bricks a minimum of three horizontal courses wide.

Level 3: Comprised of the interface between Levels 3 and 4 that lies between Features 1 and 8. The soil, 4-6 cm thick, was dark grayish brown (10YR3/2) silty sand mottled with small amounts of dark brown (10YR3/3) silty sand, and it lay horizontally. The lower boundary was diffuse.

Level 4: Consisted of dark brown (10YR3/3) silty sand a maximum of 8 cm thick. Levels 4a and 4b were physically merged within this unit. Level 4 extended only as far west as the western limits of the two features, and it was completely truncated south of Feature 1. Artifact density was very low (see Appendix 2). Feature 16 lay in the extreme northwestern corner of the unit and extended 45 cm east and 54 cm south of the unit's northwest stake. In this unit, the feature was subrectangular. The matrix consisted of red (2.5YR4/8) fine silty sand and was 18 cm thick. In profile, the eastern edge of the feature was very steep, nearly vertical, and the base appeared to be flat. Determination of the actual shape of the feature's base was difficult because of leaching. The feature was devoid of artifacts in Unit 17.

Level 5: Lay directly beneath Level 4 and the features in the northern half of the unit and beneath Level 2 in the southern half of the unit. Both color and texture were typical. A maximum of 14 cm was removed before termination of excavation in the unit. It was devoid of artifacts. Excavation was terminated at a depth of 20 cm above the southwest stake.

unit 18 (S20 W10)

General

Description:

Unit 18 was a moderately disturbed 2 m square located in the center of the west-central north/south tier of units (Figures 3, 25, and 28); it lies immediately north of Unit 17. A 20 cm balk was left unexcavated along the unit's north wall.

Level 1:

The surface of the unit was slightly hummocky and sloped to the west-southwest, dropping between 22 cm and 26 cm from the northeast to the southwest corner (approximately 5° slope). The 2 cm thick Level 1 was discarded. After its removal, portions of Levels 2, 3, and 4a were exposed to the surface.

Level 2:

Occurred only in the northeastern third of the unit and extended along the unit's eastern wall. It was typical in both color and texture. A maximum of 15 cm thick in the unit's northeast corner, the lower boundary of Level 2 lay horizontal while the upper surface tapered westward. Although Level 2 was not screened, a small number of artifacts were recovered (see Appendix 2).

Level 3:

Present only in the northern one-fourth of the unit. It did not quite extend all the way to the unit's east wall, but exited through the northeastern corner. Typical in both color and texture, the level lay relatively horizontal. Between 6 cm and 8 cm thick, Level 3 tapered to 2 cm thick in the western quarter of its expanse. The upper portions of the level had been truncated here before excavation.

Level 4a:

Relatively intact across the entire unit, this level lay directly under Level 3 where the latter was present. It did appear, however, that the upper 5-8 cm of Level 4a in the southwestern one-third of the unit had been completely truncated. This coincided with the area disturbed by tree removal in Unit 24. Level 4a was very complex, although fairly typical in color and texture. Changes in color and configuration of the various areas within the level allowed for the separation of Levels 4a and 4b.

The surface of Level 4a displayed a feature and a series of different discolorations. In this unit, the northeastern portion of Feature 16 was present in the southwest quadrant, extending in an arc shape between 1.4 m north and 1.35 m east of the unit's southwest grid stake. Internally, the feature was composed of a reddish brown (5YR4/4) silty sand intermixed with small brick fragments. Feature 16

was a maximum of 30 cm thick: the upper 20 cm were very distinct, the lower 10 cm were very diffuse and heavily leached, and the base appeared to be horizontal. Along the extreme northeastern edge of the feature in the center of the unit, a concentration of broken bricks was encountered. Oblong in shape, it measured 65 x 38 cm with the long axis oriented between 27° and 30° west of North. The brick fragments averaged 5-10 cm on a side, and there was a large number of fragments less than 3 cm. This concentration lay on the surface of the feature, penetrating it no more than 3-5 cm. None of the bricks appeared to be in its original position. Although it is considered to be the ruined portion of a structural feature related to Feature 16 and possibly to Feature 8, its true function remains somewhat enigmatic.

- Area 1: A band of reddish gray (5YR5/2) silty sand surrounded the feature on all sides. The zone, 20 cm thick and clearly affected by heat, ranged from a minimum of 10-15 cm wide on the north end of the feature to a maximum of 50-54 cm on the east side. None of the adjacent units contained this zone. This zone did not contain any artifacts. Feature 16 was originally designated as Area 1.
- Area 2: Located north of the discoloration surrounding Feature 16 in the northwest quadrant of the unit. The boundary between the two zones was diffuse. Consisting of a dark brown (7.5YR3/4) silty sand, Area 2 most closely resembled Level 4a in its classic form. A large number of small brick fragments were present in the matrix. The area was 50-54 cm (N/S), 1.25 m long (E/W), and 14 cm thick at its eastern end, tapering to 10 cm thick at its western end. Lying along the base of Area 2 was an intermittent lens of light yellowish brown (10YR6/4) silty sand 2-4 cm thick; the base of the area lay horizontally. In the center of the north wall profile (Figure 7), a thin lens of charcoal 34 cm in length was observed overlying a lens of yellowish brown soil. The charcoal lens was not observed in plan. It may represent the remains of a board. The significance of this lens is discussed in the structural analysis section.
- Area 3: Lies east of Area 2 and the discoloration surrounding Feature 16. It is a zone of light yellowish brown and yellowish brown sand, and the upper 6-10 cm had been disturbed. Below the disturbance, the area consisted of a uniform light yellowish brown (10YR6/4) silty sand that extended an additional 10 cm deep. It

thickened slightly in the northern end of the unit. The southern 65 cm of Area 3 were also heavily disturbed by the removal of a tree; it is part of the same disturbance in Unit 24 (S20 W8).

- Level 4b: After removing 19 cm of Level 4a, the configuration of the areas had changed significantly and the interface between Levels 4a and 4b began to appear. Feature 16 persisted into this part of Level 4. The shape remained a quarter-circle extending 1.48 m north and 94 cm east of the unit's southwest stake, but the matrix was slightly lighter in color. Several areas were designated for Level 4b.
- Area 4: Covered most of the unit's floor at this level. Consisting of a dark reddish brown (5YR3/3) silty sand with a distinct gray cast, this area appeared to be the heat-affected remains of the preconstruction A1 soil horizon. The area was 20 cm thick and had a very diffuse boundary. It produced a small quantity of prehistoric chipping debris (see Appendix 2). Area 4 lay within Level 4b.
- Area 7: Very similar in composition to Area 4 and considered to be unaltered preconstruction A1 soil horizon. It consisted of a brown (10YR4/3) silty sand with a slight grayish cast. The area was 20 cm thick and had a very diffuse lower boundary. Area 7 lay within Level 4b.
- Areas 5 and 6: Located in the southeast and northeast corners of the unit, respectively. They both consisted of light yellowish brown (10YR6/4) silty sand. The two areas were only 4 cm thick and represent the basal portions of Area 3 from Level 4a. Area 5 extended 65 cm north and 55 cm west of the unit's southeastern stake and was devoid of artifacts. Area 6 extended 32 cm south of the north balk and 80 cm west of the unit's northeast corner. The area yielded a single large chunk of lime-based mortar (see Appendix 2).
- Level 5: Lay directly under Level 4b. It was the usual yellowish brown silty sand. Excavation was terminated at a depth of 82 cm below the northeast corner of the unit.

### Unit 19 (S18 W10)

- General Description: Unit 19 was a 2 m square located in the center of the west central north/south tier of units and lay immediately north of Unit 18 (Figures 3, 26, 28, and 29). The upper portions (Level 3) of this unit were slightly disturbed. A 20 cm balk was left unexcavated along the north wall of the unit.
- Level 1: The surface was slightly hummocky and sloped to the southwest, dropping 48 cm (13° slope). There was a very thin Level 1 (1-2 cm) across the unit. After its removal, Level 2 and a portion of Level 3 lay exposed.
- Level 2: Present in the northern half and southeastern quadrant of the unit. Typical in both color and texture, the level was a maximum of 30 cm thick in the unit's northeastern corner and tapered to 10 cm thick in the northwest corner and 8 cm thick in the southeastern corner. The lower boundary was very uneven and undulated with the impressions of bulldozer treads in the upper surface. Level 2 was devoid of cultural materials and was not screened.
- Level 3: Present across the entire unit. It was slightly darker than usual, consisting of a very dark gray (10YR3/1) sandy loam. The level was 8-10 cm thick except in the unit's southwestern quadrant, where the upper 2-3 cm had been truncated before excavation. Level 3 lay horizontally.
- Level 4a: Lay directly under Level 3. As in Unit 18, Level 4a was very complex, being composed of several differently colored areas. Upon the first exposure of the top of Level 4, it consisted of a uniform dark yellowish brown (10YR4/4) to dark brown (10YR4/3) silty sand with a large number of brick fragments intermixed. After removal of the initial 10 cm, a series of differently colored zones and a feature began to appear. An additional 6 cm had to be removed in the southwest quadrant before any areas appeared. At this point, the unit floor was remapped. Level 4a was completely subdivided into four areas and a single feature.
- Feature 10: This internal wooden wall or support cut diagonally across the center of the unit and was oriented 12° north of East. It extended across the full east-west length of the unit and was 30 cm wide.



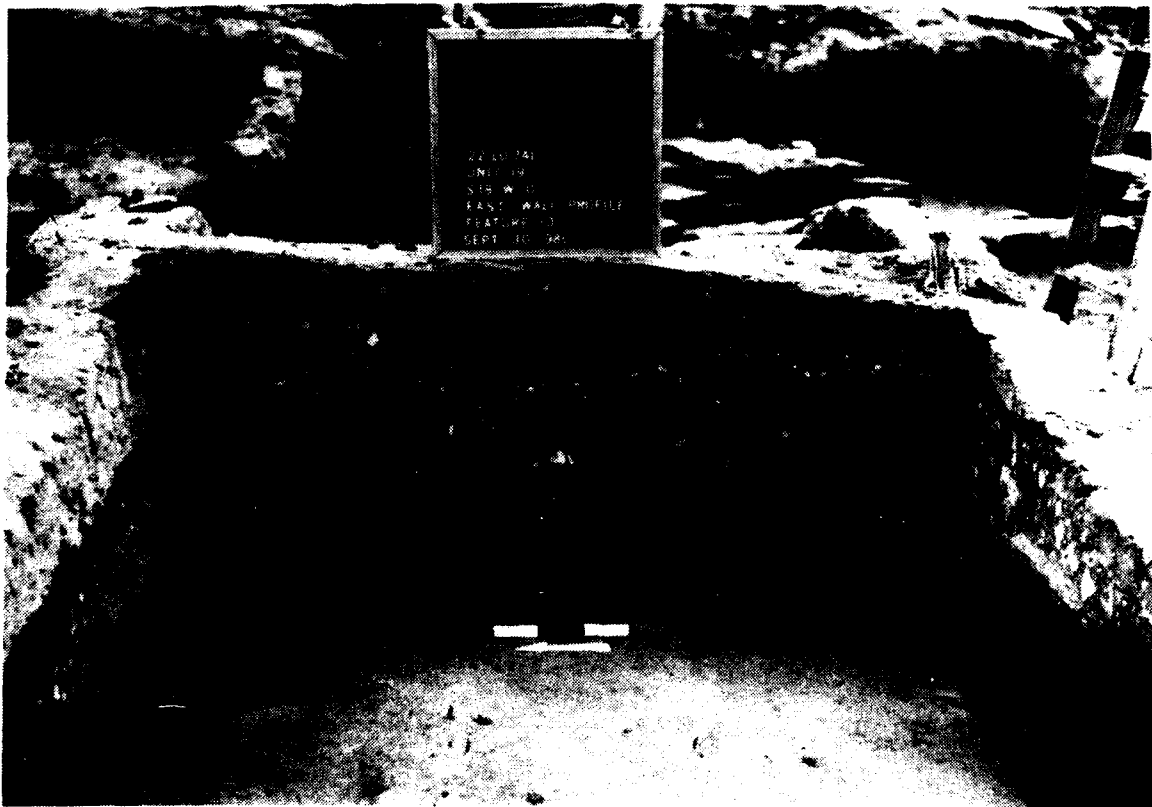


Figure 29. Unit 19, feature wall profile.

Areas 1 and 2: Located south of Feature 10 in the unit's southeastern quarter and the southern half of the southwestern quarter. Although these two areas were divided on the basis of a root stain extending southward from Feature 10 (Area 1 was east of the root run and Area 2 was west of it), they can be considered a single entity within the structure. Both exhibit evidence of having been exposed to fire. The matrix consisted of brown to dark brown (10YR4/3) hard sand mottled with strong brown (7.5YR4/6) and reddish brown (2.5YR4/4) sand. Throughout the area, a small amount of charcoal and a moderate amount of small brick fragments were intermixed. In addition, there were several zones of burned earth and ash lenses within these areas (Figure 4). There was a difference in artifact density: Area 1 had a moderate density and Area 2 a very low density (see Appendix 2). The in situ fragments of a shattered base of a free-blown wine bottle (Vessel 12) were recovered 50 cm north and 10 cm west of the southeastern corner, 9 cm below the unit datum (southwest stake). This zone was 8-10 cm thick and horizontal.

Area 3: A small, 12 cm thick zone of light yellowish brown (10YR6/4) sand located north of Feature 10 in the northeastern corner of the unit. Spanning the full distance between the unit's northern balk and Feature 10, it extended 40 cm west of the unit's east edge. This is the same sand fill present throughout the northern portion of the structure. It was nearly devoid of artifacts other than brick fragments (see Appendix 2).

Area 4: Consisted of the typical brown to dark brown (10YR4/3) sand comprising Level 4a in general. It was in the area north of Feature 10 and west of Area 3 and in the small area west of Area 2 on the southern side of Feature 10. With a maximum thickness of 16 cm west of Area 3, it tapered until it nearly disappeared at the western limit of the unit.

Level 4b: After Areas 1-4 and Feature 10 were removed, Feature 10, Subfeature 1 was exposed. This level corresponded to the interface between Levels 4a and 4b, which was a wide discoloration (95 cm N/S) consisting of mottled gray (10YR5/1) and yellowish brown (10YR5/4 and 10YR5/6) silty sand. The subfeature was oriented along the same line as Feature 10. This has been determined to be the "builder's trench" associated with Feature 10. Although only a small number of artifacts were recovered from the subfeature, it

is important to note that they were virtually all of prehistoric origin. On either side of Feature 10, Subfeature 1, the soil consisted of a brown (10YR3/4) silty sand typical of Level 4b inside of the structure. This zone was between 10 cm and 16 cm thick and had a somewhat diffuse lower boundary.

Level 5: The usual yellowish brown silty sand. A minimum of 10 cm was removed before terminating excavation at a depth of 40 cm below the southwest corner.

Unit 20 (S22 W12)

General Description: Unit 20 was a disturbed 2 m unit at the southern end of the westernmost north/south tier of units (Figures 3, 23, and 27). It lay at the effective southwestern corner of the site.

Level 1: The surface of the unit was gently undulating and sloped sharply from east to west, dropping 60 cm in height (approximately 18°-20° slope) across the north end of the unit. The southern half of the unit's surface did not slope as steeply, with only a 10° slope. There was a thin mantle of Level 1, 1-2 cm thick, across the entire unit.

Level 2: Discontinuous across the unit. Consisting of a dark brown (10YR3/3) silty sand mottled with yellowish brown (10YR5/4) silty sand, Level 2 was somewhat atypical in color and texture. It occurred in the western half of the unit and in the western half of the unit's southeastern quadrant. The continuity of Level 2 in these areas was interrupted by a 30 cm wide exposed finger of Level 5 extending 1.74 m southwestward from the center of the unit's west wall. A zone of Level 5 30-50 cm wide was also exposed along the southern three-quarters of the unit's east wall. The thickness of Level 2 varied from a maximum of 21 cm to a minimum of 4 cm; it was thickest in the northwestern quadrant. This level was screened, producing a low to moderate amount of artifacts (see Appendix 2).

Level 3: Completely removed before excavation.

Level 4: Also nearly completely removed before excavation. This stratum was represented only by Feature 16, which was located in the northeastern quadrant. In plan, the edge of the feature formed an irregular arc extending from a point 1.2 m west of the unit's northeast stake to a point 60 cm south of this stake.

The outer edge did not appear to be the true edge of the feature. An unknown portion of the feature had been truncated. The matrix consisted of a uniform red (2.5YR4/8) fine silty sand that was a maximum of 20 cm thick in the northeastern corner. A thin mantle (2-3 cm) of intermixed red and very dark grayish brown (10YR3/2) fine silty sand lay over the feature. This is considered to represent the Level 3/Feature 16 interface. The base of Feature 16 was horizontal, flat, very diffuse, and highly leached. No artifacts were recovered from the feature in this unit.

Level 5: Lay directly under Level 2 and Feature 16 and consisted of the usual yellowish brown to light yellowish brown sand. A minimum of 10 cm of the stratum was removed before excavation was terminated. A maximum of 36 cm of the level was removed in the eastern half of the unit. Excavation was terminated at a maximum depth of 90 cm below the unit's northeast stake. Over the eastern two-thirds of the unit, excavation was terminated at a depth of 60 cm below the unit's northeast stake.

#### Unit 21 (S20 W12)

General Description: Unit 21 was a disturbed 2 m square located along the western boundary of the site, immediately north of Unit 20 (Figures 3, 23, and 25).

Level 1: The surface of the unit was horizontal and even only in the northeast quadrant. It then dropped sharply 18 cm. In the southeast quadrant, it leveled off at the top of Feature 16. The western half of the unit sloped westward, dropping 46 cm in one meter's distance (25° slope). Level 1 was a thin mantle of dry dust 1-3 cm thick covering the unit.

Level 2: Present only in horizontal, isolated patches in the west-central portion and northeast quadrant of the unit. Where present, the stratum was typical in both color and texture. It was a maximum of 6 cm thick. The level was screened and artifact density was low (see Appendix 2).

Level 3: Completely destroyed before excavation.

Level 4a: Present only in the northeast quadrant. It was slightly lighter in color than usual, consisting of a dark yellowish brown (10YR4/4) silty sand. It was thickest in the northeast corner where it measured 10

cm thick, tapering southward until it met Feature 16. This horizon was distinguished from Level 4b by a higher concentration of brick fragments. The level appeared to be slightly disturbed and had a low artifact density.

Level 4b:

Also present only in the northeast quadrant. It was the usual dark yellowish brown (10YR4/4) silty sand and was 20 cm thick. The level lay horizontally and had a low density of artifacts, all of which were recovered from the upper half of the level. Level 4b was not present in the area of Feature 16. In plan, Feature 16 had the shape of an irregular quarter circle extending between 1.16 m north and 1.2 m west of the southeast corner. The matrix was 22 cm thick and a red (2.5YR4/8) silty sand with a thin lens (1-2 cm) of mottled dark yellowish brown (10YR4/4) and red (2.5YR4/8) silty sand overlying it. The lower boundary of the feature was horizontal, although it was heavily leached and diffuse. A root disturbance obscured the configuration of the northern edge of the feature's profile, which appears to have been nearly vertical. An unknown portion of the western edge was truncated and produced a few artifacts (see Appendix 2).

Level 5:

Directly under Level 4 and Feature 16 in the east half of the unit and exposed at the surface in the west half. The stratum consisted of the usual light yellowish brown silty sand. A maximum of 45 cm was excavated in the east half of the unit and 30 cm in the west half. It was culturally sterile. Excavation was terminated at a depth of 60 cm below the unit's northeastern stake in the east half of the unit and at a depth of 86 cm below the northeastern stake in the west half.

Unit 22 (S18 W12)

General

Description:

Unit 22 was a heavily disturbed 2 m square in the center of the westernmost north/south tier of units, immediately north of Unit 21 (Figures 3, 23, and 26). Unit 22 lay along the effective western boundary of the site.

Level 1:

The surface was relatively even and sloped fairly steeply (approximately 15° slope) from east to west, dropping 45 cm in height. Level 1 was present only in thin, isolated patches and was discarded.

Level 2: Before excavation, Levels 2, 3, and 4 were exposed at the surface. The area Level 2 covered was C-shaped, extending along the north wall, west wall, and the western half of the south wall. Slightly darker than usual, it consisted of intermixed dark brown (10YR3/4), brown (10YR4/4), and yellowish brown (10YR5/4) sand with a moderate amount of brick fragments. Level 2 was relatively thin, reaching a maximum thickness of 19 cm in the extreme northeastern corner, but it was generally no more than 5-7 cm thick over the rest of the unit. Artifact density was low (see Appendix 2).

Level 3: Present in the eastern half of the unit. It was typical in color but much sandier in texture than usual. While the surface and lower boundary undulated slightly, the level did lie relatively horizontal. A thickness of 6 cm was recorded in the northern half of Level 3, tapering to 1 cm in the southern half at the unit's south wall. Artifact density was moderate (see Appendix 2).

Level 4a: Levels 4a and 4b were almost identical in this unit. Level 4a existed only in a thin strip 20-30 cm wide and 6-10 cm thick along the eastern wall of the unit. It was composed of a dark yellowish brown (10YR3/4) silty sand and could be distinguished from Level 4b by the presence of a moderate amount of brick fragments. The stratum lay relatively horizontal and had a high density of artifacts (see Appendix 2).

Level 4b: Directly below Level 4a. Originally designated as Zone 1, before the creation of the Level 4b designation, this Level was somewhat atypical because its upper portions consisted of a dark yellowish brown (10YR3/4 to 10YR4/4) silty sand. With depth, the color gradually faded to a solid 10YR4/4. Level 4b was approximately 20 cm thick. Both the upper and the lower boundaries were diffuse and gradually fused with the adjacent Level. Level 4b was present only in the southeastern half of the unit.

A diffuse discoloration identified as the western end of Feature 10, Subfeature 1 (see feature descriptions) protruded into Level 4b both vertically and horizontally. The discoloration occupied the southern 1.24 m of the unit and extended 1.08 m west of the unit's east wall; the end of the discoloration was truncated at this point. In this unit, the feature was basin shaped and had a maximum thickness of 25

cm. The matrix consisted of a dark brown (10YR3/3) silty sand with a slight gray cast mottled with a minor amount of dark yellowish brown (10YR5/6) silty sand. The lower boundary was clear. It was devoid of cultural materials.

Level 5: Consisted of the typical yellowish brown silty sand. Excavation was continued until a minimum of 10 cm of this level had been exposed. Excavation was terminated at a depth of 55 cm below the unit's northeast stake.

#### Unit 23 (S22 W8)

General Description: Unit 23 was a heavily disturbed 2 m square at the southern end of the central north/south tier of units (Figures 3 and 27).

Level 1: The surface of Unit 23 was irregular. Over most of the unit, it was fairly even with a few small hummocks, sloping downward approximately 10 cm along the eastern edge of the unit. In addition, there were the remains of the beginnings of a trench started during the survey phase in an attempt to locate the southern wall of the structure. This trench was abandoned as nonproductive and never given a designation because it never penetrated undisturbed soils. Level 1 consisted of dried-out chunks of soil scattered across the unit. It was discarded.

Level 2: Somewhat darker than normal, consisting of a dark brown (10YR3/3) sand with a large number of brick fragments intermixed. Since Level 2 consisted of redeposited soil that apparently originated from over Feature 1--East Wall, it was rapidly screened in an attempt to recover any nonbrick ceramic remains in the fill. The level ranged in thickness from a maximum of 38 cm in the central portion of the unit to a minimum of 12 cm along the western edge. Although it generally averaged between 25 cm and 30 cm thick, the lower boundary of Level 2 was very sharp and abrupt. Artifact density was low (see Appendix 2).

Level 3: Not present.

Level 4: Not present except for small disturbed patches along the unit's north wall.

Level 5: A sterile subsoil directly underlying Level 2. The basal remnants of Feature 1--South Wall also lay

beneath Level 2 and were heavily disturbed. Only a single line of bricks was extant and even this was horizontally displaced. The bricks were laid directly upon and were surrounded by yellowish brown sand. There was no indication of a builder's trench associated with Feature 1 in this unit. Excavation was terminated at the base of Feature 1--South Wall.

#### Unit 24 (S20 W8)

##### General

##### Description:

Unit 24 was a heavily disturbed 2 m square located central north/south tier of units (Figure 3). The disturbance originated from a combination of the removal of a large tree and the truncation of the southern edge of the bench. A 20 cm balk was left unexcavated along the north wall. There was a small portion of Unit 3 in the eastern portion of Unit 24; its east wall ran diagonally through the unit from a point 1.23 m south of the unit's northeast stake to a point 16 cm west of the same grid stake.

##### Level 1:

The surface was nearly flat except along the eastern edge of the unit, where it dropped sharply 20 cm to the base of Unit 3. This represents the western edge of the original bulldozer cut. Level 1 was restricted to isolated patches no more than 1-3 cm thick.

##### Level 2:

Present across the entire unexcavated portion of the unit. The matrix was slightly darker than usual, consisting mainly of dark yellowish brown silty sand with a large number of brick fragments intermixed. The thickness of the stratum varied greatly. In the northwest quadrant and along the northern 30 cm of the northeast quadrant, Level 2 was 23 cm thick. South of this area, the thickness of the horizon sharply increased to between 36 cm and 40 cm. The disturbance in this area bottomed out at the interface between Levels 4a and 4b (the preconstruction A1 soil horizon). North of this, portions of Level 4a were still relatively intact. Level 2 was rapidly screened in search of nonbrick ceramic remains, but the number of artifacts recovered was low (see Appendix 2).

##### Level 3:

Present only in the form of isolated, highly disturbed patches. Since none of it appeared to be in situ, it was treated as part of Level 2.



Level 4a: Present only in the unit's northwest quadrant and in the north half of the northeast quadrant. Although specific area designations were not assigned, two distinct zones were present. There was a light yellowish brown (10YR6/4) fine sand in the northwest quadrant that was 14-17 cm thick and lay horizontally. This zone corresponded to Areas 3, 5, and 6 in Unit 18. East of this area was an intact zone of general Level 4a that was composed of a brown to dark brown (10YR4/3) silty sand. The zone reached its widest north-south extent (28 cm) at its western end. It curved northeastward, exiting the unit through the northeast corner. Both zones were devoid of artifacts. After the removal of Level 4a, a small portion of the builder's trench associated with Feature 1 was discovered in the extreme northeast corner. The edge of the feature entered the unit at a point 17 cm west of the unit's northeast stake and exited at a point 70 cm south of the same stake. Directly underlying Level 2 and Level 4a, where it was present, was a thin diffuse zone of soil that formed the interface between Levels 4a and 4b. This was only several centimeters thick and gave way to Level 4b.

Level 4b: Consisted of a dark yellowish brown (10YR3/4) silty sand. Excavation was terminated at Level 4b, 28-36 cm below the unit's southwest stake.

Unit 25 (S14 W12)

General

Description:

Unit 25 was a 2 m square at the northern end of the westernmost north/south tier of units (Figures 3 and 23). It lay immediately north of Unit 10. The head of the ravine forming the effective western boundary of 22Lo741 was approximately 80 cm due west of the unit. A 20 cm wide balk was left unexcavated along the unit's west wall.

Level 1: The surface was relatively even and sloped from east to west, dropping 35 cm in height (approximately 10% slope). Level 1 was not present in any quantity.

Level 2: Fairly typical in color and texture, but a large number of tree limbs and roots were mixed in the redeposited soil. The level tapered from east to west with the base of the horizon sloping upward. Generally, it was a maximum of 65 cm thick in the eastern half of the unit except in one area in the north-central portion of the unit where the base dipped an additional 10 cm. In the western fourth of

the unit, Level 2 sloped steeply upward 30 cm (Figure 22). Although this level was not screened, a small number of artifacts were recovered (see Appendix).

Level 3: Consisting of a very dark gray (10YR3/1) slightly sandy clay, it was light in color and clayier in texture than is typical for the twentieth century A1 soil horizon at the site. It ranged in thickness from a maximum of 25 cm in the east-central portion of the unit to 6 cm in the center of the unit. Level 3 was present only in the eastern three-fourths of the unit, which overlies Feature 9 except in the southwestern quadrant, where a 50 cm wide (N/S) arm extended westward along the south wall. Elsewhere in the unit, Level 3 was truncated along with portions of Level 4. The level is concave in profile with the lowest portion of the level overlying the western edge of Feature 9.

Level 4a: Not present.

Level 4b: Consisted of a dark yellowish brown (10YR3/4) sand. As noted above, Level 4b was truncated in the northern half of the southwestern quadrant and in the northwestern quadrant of the unit. Beyond the edges of Feature 9, Level 4b was thin (averaging 6 cm thick) and somewhat spotty. It has a maximum thickness of 10 cm along the north wall of the unit. In the eastern half of the unit, Level 4b was indistinguishable from the fill of Feature 9. Feature 9 extended the entire north-south length of Unit 25 along the eastern wall and was 52 cm wide east-west.

Level 5: Consisted of the usual yellowish brown (10YR5/4) sand. In the western half of the unit, a maximum of 40 cm was removed to bring the unit floor level with the top of Feature 9. In the eastern half, 10 cm of Level 5 were exposed below the bottom of Feature 9. Excavation was terminated at a depth of 51 cm below the southwest stake in the west half of the unit and a depth of 3.07 m below the southwest stake in the eastern half.

#### Unit 26 (S18 W8)

General Description: Unit 26 was a 2 m square located in the central portion of the central north/south tier of units (Figures 3 and 26) and lying immediately south of Unit 11. Unit 3 partially overlapped this unit. The

previously excavated portion of Unit 26 covered a trapezoidal area 44 cm wide at the north end and 18 cm wide at the south end along the unit's eastern edge. Balks were left unexcavated along the north and west walls.

- Level 1: The surface of the western half of Unit 26 was relatively horizontal, while the eastern half sloped downward an average of 15 cm over a distance of 1 m. Level 1 was absent in Unit 26.
- Level 2: Typical in both color and texture. The level covered the entire unit, ranging in thickness from a maximum of 21 cm in the unit's northwest quadrant to a minimum of 10 cm in the southern half. The base of Level 2 undulated slightly. In an effort to recover ceramic remains, Level 2 was rapidly screened; it produced a few artifacts (see Appendix 2).
- Level 3: Present only in the western half of the unit because heavy machinery disturbed the eastern portion. The level was typical in both color and texture, was between 8 cm and 10 cm thick, and lay horizontally. Artifact density was low (see Appendix 2).
- Level 4a: Lay directly beneath Level 3 and as with the other units lying within the northern half of the structure, it was internally complex. Upon first exposing the top of Level 4, it consisted of a uniform dark yellowish brown (10YR3/4) sand similar to that in Unit 19. It also had a large number of brick fragments intermixed, except in the northeastern quadrant where the dark yellowish brown (10YR3/4) sand had been previously removed. Across the rest of the unit, this upper portion of Level 4a varied in thickness from 10 cm in the unit's southwest corner to between 1 cm and 3 cm across the rest of the unit. After this was removed, several areas and features began to appear (Figure 30). The entire floor was divided into and assigned area designations, so the materials recovered above these are referred to just as Level 4a.
- Area 1: Extended through the east-central portion of the unit from the east edge of the unexcavated portion of the unit. It was somewhat elongated in shape with recurvate edges and was 1.08 m long (E/W) and 50 cm wide (N/S). The matrix was a very dark gray (10YR3/1) silty sand with a large amount of charcoal and brick fragments intermixed. After removing 8 cm of the area, it expanded to traverse east to west



Figure 30. Unit 26, Level 4a (forging area).

through the central portion of the unit, remaining 50 cm wide (N/S). The amount of brick in the area also increased until it was virtually all brick rubble with some patches of charcoal and ash dispersed throughout. In cross section, Area 1 had a flat bottom and straight sides. Its base lay directly on the nineteenth century A1 soil horizon. Area 1 had a moderate density of artifacts, mostly nails and other metal items (see Appendix 2).

Area 2: A small discoloration in the southwest corner of the unit that had a slightly curved outer edge and extended 40 cm east of the west balk and 42 cm north of the southwest corner. The matrix consisted of a strong brown (7.5YR4/3) to dark yellowish brown (10YR4/6) silty sand with a small amount of tiny brick fragments intermixed. Area 2 resembled the general Level 4b. In cross section, it had a flat bottom that lay directly on top of Feature 11. Area 2 was devoid of artifacts.

Area 3: An L-shaped band of dark brown (7.5YR3/4) silty sand with a small number of brick fragments intermixed that surrounded Area 2 on its north and east sides. The band was 20 cm wide and 8-10 cm thick. It too had a flat bottom and directly overlay Feature 11. Area 3 was also devoid of artifacts.

Area 4: Designated as the zone south of Feature 10 and surrounding Areas 1 and 3. It consisted of a dark yellowish brown (10YR3/4) silty sand mottled with yellowish brown (10YR5/4) silty sand. Area 4 faded as Area 1 expanded and Features 10 and 11 became clearly defined. This area most closely resembled Level 4a in its classic form. Artifact density was low to moderate (see Appendix 2).

Area 5: A zone of light yellowish brown (10YR6/4) sand extending along the unit's north balk, north of Feature 10. It extended 1.06 m west of the east edge of Unit 3. This zone was 20-22 cm thick and its base rested on the nineteenth century A2 soil horizon (Level 4b). It was devoid of artifacts.

Area 6: Located between Area 5 and the west balk of the unit, Area 6 was 30 cm long (N/S), 34 cm wide (E/W), and consisted of a thin (2-3 cm) zone of charcoal and blackened sand. Area 5 extended beneath Area 6.

Feature 10: Extended across the north-central portion of the unit.

It was poorly defined until between 30 cm and 34 cm below the unit's southwest corner. At this depth, it was bordered on the south by Area 1 and on the north by the light yellowish brown (10YR6/4) sand fill that pervades the northern half of the structure.

Feature 11: Located along the southern wall of the unit and paralleling Feature 10. Area 1 bounded it on the north. It was a solid brick feature.

Level 4b: After Level 4a was removed, several additional discolorations appeared in the surface of Level 4b. In the unit's southeastern corner, the northwestern edge of the Feature 1--Builder's Trench was exposed. Between this and Feature 11, the remnants of the nineteenth century A1 soil horizon was exposed. Running through the central portion of the unit was a zone of dark yellowish brown (10YR4/4) silty sand that lined up with Feature 10, Subfeature 1 in Unit 19. North of this zone, portions of the original nineteenth century A1 and A2 soil horizons were exposed. The unit was terminated at a depth of 50 cm below the southwest corner. Time did not permit excavation to proceed below the surface of Level 4b except for the removal of all remaining cultural deposits such as the builder's trench.

#### Unit 27 (S16 W6)

##### General

##### Description:

Unit 27 was a 2 m square at the north end of the east-central north/south tier of units. It lies immediately east of Unit 11. Unit 27 subsumes the western portion of Unit 2 (S15.14 W5.90), which lay in the northeastern corner of Unit 27. The unit also subsumes a portion of Unit 3, which lay along the western edge of Unit 27 (Figures 3 and 22). The northern edge of the bulldozer cut extends through the center of the unit.

Level 1: The surface of Unit 27 was relatively horizontal except in the southern half, where the bulldozer cut removed approximately 20-25 cm of the overburden. Level 1 was not present in this unit.

Level 2: Typical in both color and texture, it was a maximum of 48 cm thick in the unit's northeastern quadrant and averaged 30 cm thick in the northern half. In the southern half, Level 2 tapered to between 10 cm and 20 cm thick. Although the level was not screened, a

small number of artifacts were recovered (see Appendix 2).

Level 3: Immediately underlying Level 2 were the truncated remains of Level 3. This level was typical in both color and texture. It was only 6 cm thick at its maximum and averaged between 2 cm and 4 cm thick. The horizon appeared to have its upper portions truncated. It lay horizontally and covered the entire unit. After removing the remnants of Level 3, the eastern edge of the Feature 1--Builder's Trench was exposed. This feature covered the western half of the unit and consisted of the usual light yellowish brown and yellowish brown sand. In Unit 27, it was very thin (6 cm) except along the extreme western edge of the unit where this feature is described more fully below. Because of time constraints, excavation was terminated after the removal of Level 3 and Feature 1--Builder's Trench.

#### Unit 28 (S22 W6)

General Description: Unit 28 was an extensively disturbed 2 m square at the southern end of the east-central north/south tier of units (Figures 3 and 27). It lies immediately east of Unit 23 and contains the southeastern corner of the structure. Unit 28 subsumed the southern portion (ca. 75 cm) of Unit 3.

Level 1: The surface was undulating and sloped slightly from north to south, dropping 25 cm in height (approximately 5° slope). Level 1 was present across the entire unit and was 1-2 cm thick.

Level 2: Not present. This unit was disturbed all the way down to Level 5 and the lower three courses of Features 1 and 7. Feature 1 occupied the northern half of the northwestern quadrant, and Feature 7 extended north-eastward at a 45° angle beginning at the southern end of Feature 1. After removal of Feature 1, Feature 13, a postmold, was exposed. Besides the features, the unit consisted of yellowish brown sand typical of Level 5. None of Level 5 was excavated; only the features were removed. See Appendix 2 for a list of artifacts recovered from Unit 28.

APPENDIX 2  
RAW ARTIFACT LIST

Surface

I. Glass

Plate (window)--17 fragments

Bottles

Lip/Neck Fragments

Alcoholic Beverage

Light/medium olive green

Dark olive green

Nonalcoholic Beverage

Light/medium green (nonlead)

Applied

Lip

Mold

Finished

Unidentified

1

1

1

2

1

Body Fragments

Alcoholic Beverage

Light/medium olive green

Nonalcoholic Beverage

Light/medium green (nonlead)

Unidentified

Clear (nonlead)

Light/medium green (nonlead)

Light/medium blue (aqua)

Light/medium olive green

Dark olive green

Dark brown

Unidentified      Mold  
Decorated

7

2

1

6

1

2

7

1

11

4

Base Fragments (all are kicked-up)

Alcoholic Beverage

Dark olive green--2

Unidentified

Aqua--2

Tumblers

Decorated clear leaded glass--1 base fragment

Unidentified Glass

Melted--1

II. Ceramics

Soft-fired Brick

Glazed--8 fragments

Unglazed--2 whole and 5 fragments

Decorated White Paste Earthenware

Textured sponge

Polychrome painted

Transfer print

"Old Blue"

Rim      Body      Base

1

2



AD-A136 554

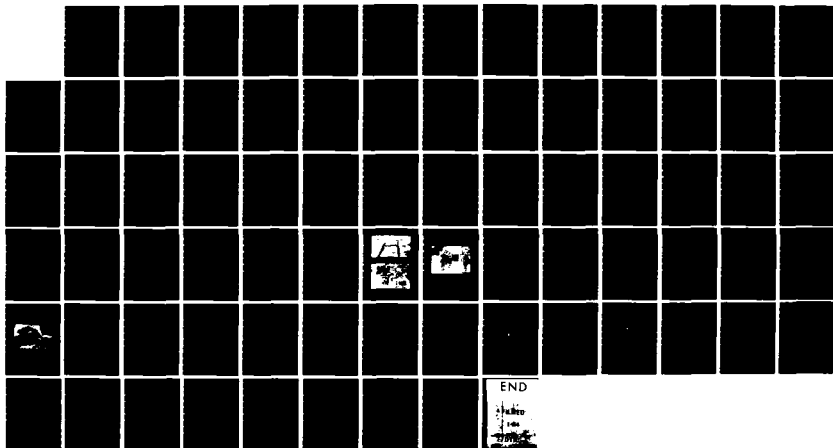
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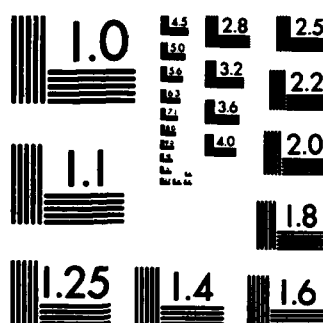
3/3

UNCLASSIFIED

F/G 5/6

NL





MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

	<u>Rim</u>	<u>Body</u>	<u>Base</u>	<u>Other</u>
Brown	2	2	1	
Undecorated White Paste Earthenware				
White cast	1	1	2	
Stoneware				
Undecorated White Paste				
White cast	1			
Color Paste				
Combination--undecorated		1		1
III. Metal				
Container		<u>Complete</u>	<u>Fragment</u>	
Round body		1	1	
Unidentified body			2	
Hardware--Construction				
Machine bolt			1	
U-bolt			1	
Brace/Bracket			1	
Square nut		1		
Hardware--Nails				
Machine cut				
4d		1		
5d		2		
6d		1		
8d		3		
9d		2		
10d		7		
Unidentified fragments			21	
Hardware--Miscellaneous				
Chain			3	
Gasket/Seal			3	
Ring/Loop		1		
Barstock			4	
Kitchen/Tableware				
Case knife--bone/wood handle			1	
Tools				
Crowbar		1		
Wedge			2	
Unidentified Metal				
Iron/Steel				
Flat			3	
Melted lead lump			1	
IV. Bone				
Unmodified			1	

	<u>Complete</u>	<u>Fragment</u>
V. Mineral/Composite/Miscellaneous Limestone		22.5 gm
VI. Prehistoric Lithic		
Modified		
Utilized flake--2		
Roughout--2		
Incomplete biface--2		
Biface--4		
Unmodified--28		
Firecracked Rock--8		
Ceramic		
Alexander Pinched <u>var. Prairie Farms</u> --1		

#### Unit 1, Level 4

- I. Ceramic
  - Decorated White Paste Earthenware
    - Brown transfer printed--2 rim sherds
- II. Metal
  - Hardware--Nails
    - Unidentified machine cut nail fragments--1

#### Unit 2, Surface

- I. Glass
  - Bottles
    - Body Fragments
      - Unidentified
        - Light/medium blue (aqua) (nonlead)--1 undecorated fragment
- II. Ceramic
  - Soft-fired Brick
    - Glazed--1 fragment
    - Unglazed--1 fragment
- III. Metal
  - Hardware--Nails
    - Machine Cut
      - 12d--1
      - Unidentified fragments--5
  - Tools
    - Auger bit--1 complete
    - Claw hammer--1 complete

IV. Prehistoric  
Firecracked rock--2 fragments

Unit 3, Level 3/4, Area 1

I. Ceramic		
Soft-fired Brick		
Unglazed--1 fragment		
II. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Construction		
Brace/Bracket		1
Hardware--Nails		
Machine Cut		
6d	1	
7d	1	
8d	2	
9d	2	
10d	4	
Unidentified		6
Unidentified Metal		
Brass-sheet		1
Iron/Steel-flat		10

Unit 3, Level 3/4, Area 2

I. Glass		
Plate (window)--1 fragment		
Bottles		
Lip/Neck fragments		
Unidentified bottle		
Light/medium olive green--1 unidentified fragment		
Body Fragments (all undecorated)		
Unidentified bottle		
Light/medium green (nonlead)--1		
Light/medium blue (nonlead)--1		
Light/medium olive green--3		
Dark olive green--1		
II. Ceramic		
Decorated White Paste Earthenware		
"Old Blue" transfer printed--1 body sherd		
III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Construction		
Bolt		
Machine		1
Unidentified		2
Square nut	2	
Square washer	1	

	<u>Complete</u>	<u>Fragment</u>
Hardware--Nails		
Machine Cut		
5d	1	
6d	4	
7d	1	
8d	3	
9d	2	
10d	10	
12d	6	
16d	1	
Unidentified		9
Hardware--Miscellaneous		
Chain		3
"Axle"	1	
Tools		
Miscellaneous machine part		1
Tack hammer		1
Wedge		4
Unidentified Metal		
Brass		
Convex		1
Melted		1
Scrap		8
Iron/Steel		5
Melted lead		4

VI. Prehistoric  
Lithic  
    Unmodified--2

Unit 3, Level 3/4, Area 3

- I. Glass  
Bottles  
    Lip/Neck Fragments (unidentified)  
        Alcoholic beverage  
        Dark olive green--1 fragment

	<u>Rim</u>	<u>Body</u>	<u>Base</u>
II. Ceramic			
Decorated White Paste Earthenware			
"Old Blue" transfer printed	4	2	1
Black transfer print	1		

	<u>Complete</u>	<u>Fragment</u>
III. Metal		
Hardware--Construction		
Disk washer	1	
Hardware--Nails		
Machine Cut		
7d	1	
9d	1	
10d	1	

	<u>Complete</u>	<u>Fragment</u>
12d	3	
Unidentified		2
Hardware--Plumbing		
Faucet	2	
Hardware--Miscellaneous		
Chain		1
Miscellaneous machine part		1
Tools		
Chisel	1	
Wedge	1	
Unidentified Metal		
Brass-scrap		1
Iron/Steel		1

#### Unit 4, Surface

- I. Glass  
 Bottles  
 Body fragments (undecorated)  
 Alcoholic beverage  
 Light/medium olive green--1 fragment

	<u>Complete</u>	<u>Fragment</u>
II. Metal		
Arms and Ammunition		
Shot	1	
Hardware--Nails		
Unidentified machine cut		1
Unidentified Metal		
Melted lead		1

#### Unit 4, Level 3/4

- I. Glass  
 Plate (window)--17 fragments

- II. Ceramic  
 Soft-fired Brick  
 Unglazed--13 fragments

	<u>Complete</u>	<u>Fragment</u>
III. Metal		
Hardware--Construction		
Square nut	1	
Disk washer	1	
Wood screw		3
Hardware--Nails		
Machine cut		
5d	3	
6d	16	

	<u>Complete</u>	<u>Fragment</u>
7d	3	
8d	15	
9d	2	
10d	44	
12d	3	
16d	1	
Unidentified		47
Hardware--Miscellaneous		
Chain		1
Miscellaneous machine parts	1	2
Tools		
Punch	1	
Unidentified	1	
Unidentified Metal		
Brass		
Melted		2
Scrap		5
Strip		4
Iron/Steel-Flat		22
Melted lead		5
Pewter		1
IV. Shell		
Unmodified		4
V. Prehistoric		
Lithic		
Unmodified		1

#### Unit 5, Level 2

I. Ceramic		
Soft-fired Brick		
Unglazed--21 fragments		
II. Metal		
Hardware--Nails		
Machine Cut		
5d	1	
Unidentified		3
III. Mineral/Composite/Miscellaneous		
Mortar--1.9 gm		
IV. Prehistoric		
Lithics		
Unmodified--17		
Firecracked rock--24		



Unit 5, Level 3

- I. Ceramic
  - Soft-fired Brick
  - Unglazed--1 fragment
- II. Prehistoric
  - Lithic
    - Unmodified--3
    - Firecracked rock--6

Unit 6, Level 2

- I. Ceramic
  - Soft-fired Brick
  - Unglazed--38 fragments
- II. Metal

	<u>Complete</u>	<u>Fragment</u>
Arms and Ammunition		
Shotgun shell		1
Hardware--Nails		
Machine Cut		
12d	1	
Unidentified		5
- III. Mineral/Composite/Miscellaneous
  - Charcoal--2.7 gm
- IV. Prehistoric
  - Lithic
    - Unmodified--12
    - Firecracked rock--6

Unit 6, Level 3

- I. Ceramic
  - Soft-fired Brick
  - Unglazed--7 fragments
- II. Metal

	<u>Complete</u>	<u>Fragment</u>
Hardware--Nails		
Machine cut		
6d	1	
9d	1	
Unidentified		2

Unit 6, Level 4

- I. Glass
  - Plate (window)--6 fragments

Bottles  
 Lip/Neck Fragment (unidentified)  
 Unidentified bottle  
 Light/medium olive green--1  
 Unidentified  
 Melted--1

II. Ceramic  
 Soft-fired Brick  
 Glazed--6 fragments  
 Unglazed--57 fragments

III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Nails		
Machine cut		
5d	1	
6d	3	
8d	3	
9d	1	
12d	4	
16d	1	
Unidentified	23	
Hardware--Miscellaneous		
Chain		1
Barstock		1
Unidentified Metal		
Brass-scrap		1
Iron/Steel-other	1	2
IV. Prehistoric		
Lithic		
Unmodified	3	
Firecracked rock	1	

Unit 6, Level 4, Feature 2 (noncultural)

I. Glass  
 Plate (window)--1 fragment

II. Ceramic  
 Soft-fired Brick  
 Unglazed--12 fragments  
 Undecorated White Paste Earthenware  
 White cast--1 body sherd

III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Nails		
Machine cut		
3d	1	
4d	1	
7d	3	
8d	2	
10d	3	

	<u>Complete</u>	<u>Fragment</u>
Unidentified		34
Hardware--Miscellaneous		
Chain		1
IV. Prehistoric		
Ceramic		
Mulberry Creek Plain, <u>var. Dead River</u> --1		
<u>Unit 7, Level 1</u>		
I. Ceramic		
Soft-fired Brick		
Unglazed--7 fragments		
<u>Unit 7, Level 2</u>		
I. Glass		
Plate (window)--1 fragment		
II. Ceramic		
Soft-fired Brick		
Unglazed--169 fragments		
III. Metal	<u>Complete</u>	<u>Fragment</u>
Arms and Ammunition		
Bullet	1	
Hardware--Nails		
Unidentified machine cut		4
Hardware--Miscellaneous		
Chain		2
IV. Prehistoric		
Lithic		
Unmodified--7		
<u>Unit 8, Level 1</u>		
I. Glass		
Plate (window)--1 fragment		
II. Metal		
Unidentified Metal		
Iron/Steel-flat--1 fragment		
III. Prehistoric		
Lithic		
Unmodified--1		

Unit 8, Level 2

- I. Ceramic
  - Undecorated White Paste Earthenware--1 base sherd
- II. Metal
  - Hardware--Nails
    - Machine cut
      - 8d--1
    - Unidentified--2
- III. Prehistoric
  - Lithic
    - Debitage--1
    - Firecracked rock--1

Unit 8, Level 3

- I. Ceramic
  - Soft-fired Brick
    - Glazed--5 fragments
    - Unglazed--29 fragments
  - Undecorated White Paste Earthenware--1 body sherd
- II. Metal
  - Hardware--Nails

	<u>Complete</u>	<u>Fragment</u>
Hand wrought	5	
Machine cut		
3d	1	
5d	2	
8d	2	
10d	3	
12d	1	
16d	1	
Unidentified		28
  - Hardware--Miscellaneous
    - Chain
  - Unidentified Metal
    - Brass-strip
    - Iron/Steel-flat
- III. Mineral/Composite/Miscellaneous
  - Slag--28.0 gm
- IV. Prehistoric
  - Lithic
    - Firecracked rock--2

Unit 8, Level 4

- I. Metal
  - Hardware--" 11
    - Unidentified machine cut nail--2 fragments

- II. Prehistoric  
 Lithic  
     Firecracked rock--1

Unit 8, Level 4, Feature 3

	<u>Complete</u>	<u>Fragment</u>
I. Metal		
Hardware--Nails		
Machine cut		
6d	1	
7d	1	
Unidentified		4
Hardware--Miscellaneous		
Chain		1
II. Prehistoric		
Lithic		
Debitage		1

Unit 9, Level 3

I. Glass		
Plate Window Glass--7		
Alcoholic Beverage Bottle		
Undecorated light/medium olive green body--1		
II. Ceramic		
Soft-fired Brick		
Glazed--6 fragments		
Unglazed--17 fragments		
III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Construction		
Iron tack	9	
Hardware--Nails		
Hand wrought	2	
Machine cut		
5d	1	
6d	1	
8d	7	
9d	1	
12d	1	
20d	1	
Unidentified		15
Unidentified Metal		
Iron/Steel		
Flat		3
Circular		1
Melted lead		2
IV. Prehistoric		
Lithic debitage		3

Unit 9, Level 4

	<u>Complete</u>	<u>Fragment</u>
I. Metal		
Hardware--Construction		
Iron tack	15	
Hardware--Nails		
Machine cut		
5d	1	
7d	1	
10d	1	
Unidentified		2
Hardware--Plumbing		
Faucet		1
Unidentified Metal		
Iron/Steel		
Flat		1
Lump		4
Melted lead		4
II. Bone		
Unmodified		1
III. Prehistoric		
Lithic debitage		5

Unit 9, Level 4, Feature 1

I. Ceramic		
Soft-fired Brick		
Unglazed--2 fragments		
II. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Construction		
Iron tack	15	
Hardware--Nails		
Hand wrought		3
Machine cut		
5d	5	
6d	4	
7d	2	
8d	11	
12d	5	
Unidentified		27
Unidentified Metal		
Brass		
Strip		1
Convex		1
Iron/Steel		
Flat		1
Lump		2
Melted lead		6

III. Prehistoric  
Lithic debitage--1

Unit 9, Level 4, Feature 1, Subfeature 2

- I. Mineral/Composite/Miscellaneous  
Charcoal--125.0 gm

Unit 9, Level 4, Feature 9

- I. Ceramic  
Soft-fired Brick  
Glazed--1 fragment  
Unglazed--1 fragment
- II. Prehistoric  
Lithic  
Modified  
Core--1  
Utilized debitage--1  
Unmodified Debitage--9

Unit 10, Level 2

- I. Ceramic  
Soft-fired Brick  
Glazed--1 fragment  
Unglazed--11 fragments
- II. Mineral/Composite/Miscellaneous  
Limestone--1.75 gm

Unit 10, Level 3

- I. Glass  
Plate (window)--9  
Bottle/Jar  
Body Fragments (undecorated)  
Alcoholic Beverage  
Light/medium olive green--1  
Unidentified  
Light/medium green (nonlead)--1  
Dark olive green--2  
Base Fragment  
Alcoholic beverage  
Dark olive green--1

II. Metal	<u>Complete</u>	<u>Fragment</u>
Activities		
Jew's harp		1
Hardware--Nails		
Machine cut		
5d	1	
7d	1	
8d	2	
Unidentified		3
Hardware--Miscellaneous		
Barstock		2
Tools		
File		1
Unidentified Metal		
Melted lead		6

III. Prehistoric  
Lithic firecracked rock--12

Unit 10, Level 4

I. Glass		
Plate (window)--7		
Bottle/Jar		
Body Fragment (undecorated)		
Unidentified--light/medium olive green--1		
II. Ceramic		
Soft-fired Brick		
Unglazed--9 fragments		
III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Nails		
Hand wrought		1
Machine cut		
6d	4	
8d	2	
Unidentified		8
Tools		
Wedge	2	
Unidentified Metal		
Iron/Steel-lump		1
Melted lead		4
IV. Mineral/Composite/Miscellaneous		
Limestone--0.2 gm		
V. Prehistoric		
Lithic		
Debitage--5		
Firecracked rock--2		



Unit 10, Level 4, Area 1

- I. Ceramic
  - Soft-fired Brick
  - Unglazed--11 fragments
- II. Prehistoric
  - Lithic debitage--17

Unit 10, Level 4, Area 2

- I. Glass
  - Plate (window)--8
- II. Ceramic
  - Soft-fired Brick
  - Unglazed--5 fragments
- III. Prehistoric
  - Lithic debitage--10

Unit 10, Level 4, Feature 9

- I. Glass
  - Plate (window)--4
  - Bottle/Jar
    - Body Fragment (undecorated)
    - Unidentified
      - Light/medium olive green--3
      - Dark olive green--1
- II. Ceramic
  - Soft-fired Brick
  - Glazed--3 fragments
  - Unglazed--6 fragments
- III. Metal

	<u>Complete</u>	<u>Fragment</u>
Hardware--Nails		
Machine cut		
8d	6	
9d	5	
10d	2	
Unidentified		7
Hardware--Miscellaneous		
Barstock		1
Unidentified Metal		
Iron/Steel-lump		3
Melted lead		3
- IV. Prehistoric
  - Lithic
    - Debitage--6
    - Firecracked rock--1

Unit 11, Surface

- I. Glass
  - Bottle/Jar
    - Body Fragment (undecorated)
      - Unidentified--dark olive green--1

Unit 11, Level 2

- I. Ceramic
  - Soft-fired Brick
    - Glazed--3 fragments
    - Unglazed--1 fragment
- II. Metal
  - Hardware--Nails
    - Unidentified machine cut--1 fragment
- III. Plastic
  - Container--1 fragment
- IV. Prehistoric
  - Lithic debitage--2

Unit 11, Level 3

I. Ceramic		
Soft-fired Brick		
Glazed--4 fragments		
Unglazed--13 fragments		
II. Metal		
Hardware--Construction		
Unidentified bolt		1
Machine screw		1
Iron tack	1	
Hardware--Nails		
Machine cut		
6d	3	
7d	3	
10d	6	
12d	1	
Unidentified		14
Unidentified Metal		
Brass		
Convex		1
Strip		1
Copper-flat		1
Iron/Steel-other		1
Melted lead		1

III. Mineral/Composite/Miscellaneous  
Charcoal--9.0 gm

Unit 11, Level 4, Feature 1

- I. Glass  
Plate (window)--23  
Bottle/Jar  
Body Fragments (undecorated)  
Unidentified  
Light/medium olive green--1  
Dark olive green--3

- II. Ceramic  
Soft-fired Brick  
Unglazed--1 fragment

III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Construction		
Unidentified bolt	1	
Square nut	1	
Rivet	1	
Iron tack	14	
Hardware--Nails		
Hand wrought		1
Machine cut		
3d	2	
7d	2	
8d	5	
9d	1	
10d	6	
16d	1	
Unidentified		36
Unidentified Metal		
Brass		
Scrap		1
Strip		1
Copper-flat		2
Iron/Steel		
Scrap		1
Strip		1
Melted lead		10

IV. Mineral/Composite/Miscellaneous  
Charcoal--31.8 gm

Unit 12, Level 1

- I. Metal  
Hardware--Nails  
5d machine cut nail--1

- II. Mineral/Composite/Miscellaneous  
Limestone--118.3 gm

Unit 12, Level 4

- I. Ceramic  
Soft-fired Brick  
Glazed--37 fragments  
Unglazed--220 fragments
- II. Metal  
Hardware--Nail  
Unidentified machine cut nail--4 fragments  
Unidentified Metal  
Iron/Steel-flat--1 fragment
- III. Shell  
Unmodified--13 fragments
- IV. Mineral/Composite/Miscellaneous  
Charcoal--0.5 gm
- V. Prehistoric  
Lithic  
Firecracked rock--5

Unit 12, Level 4, Feature 5

- I. Glass  
Plate (window)--4
- II. Ceramic  
Soft-fired Brick  
Glazed--5 fragments  
Unglazed--31 fragments
- III. Metal
 

	<u>Complete</u>	<u>Fragment</u>
Hardware--Nail		
Unidentified machine cut		5
Hardware--Miscellaneous		
Ring/Loop	1	
Unidentified Metal		
Iron/Steel		1
- IV. Mineral/Composite/Miscellaneous  
Limestone--664.0 gm
- V. Prehistoric  
Lithic  
Incomplete biface--1  
Debitage--6  
Firecracked rock--1

Unit 12, Level 4, Feature 7

- I. Ceramic
  - Soft-fired Brick
  - Unglazed--4 complete and 16 fragments
- II. Mineral/Composite/Miscellaneous
  - Limestone--146.4 gm

Unit 13, Level 3

- I. Glass
  - Bottle/Jar
  - Body Fragment (undecorated)
  - Unidentified-light/medium olive green--2

Unit 13, Level 4

- I. Glass
  - Plate (window)--1
  - Bottle/Jar
    - Lip/Neck Fragment (unidentified)
    - Alcoholic beverage-light/medium olive green--1
    - Body Fragment (undecorated)
    - Unidentified-dark olive green--1
- II. Ceramic
  - Soft-fired Brick
  - Glazed--17 fragments
  - Unglazed--100 fragments
- III. Metal

	<u>Complete</u>	<u>Fragment</u>
Hardware--Nails		
Machine cut		
12d	1	
Unidentified		4
Unidentified Metal		
Iron/Steel-flat		1
- IV. Mineral/Composite/Miscellaneous
  - Charcoal--13.9 gm
  - Limestone--8.8 gm
- V. Prehistoric
  - Lithic
    - Biface--1
    - Firecracked rock--1
  - Ceramic
    - Baldwin Plain, var. Blubber--1

Unit 13, Level 4, Feature 4

- I. Ceramic
  - Soft-fired Brick
    - Glazed--1 fragment
    - Unglazed--4 fragments
- II. Metal
  - Hardware--Nail
    - Unidentified machine cut--2 fragments
  - Unidentified Metal
    - Melted lead--1 fragment
- III. Mineral/Composite/Miscellaneous
  - Limestone--11.0 gm
- IV. Prehistoric
  - Lithic debitage--1

Unit 13, Level 4, Feature 6

- I. Ceramic
  - Soft-fired Brick
    - Glazed--31 fragments
    - Unglazed--180 fragments
- II. Metal
  - Hardware--Nail
    - Unidentified machine cut--2 fragments
- III. Mineral/Composite/Miscellaneous
  - Limestone--2.9 gm

Unit 13, Level 4, Feature 7

- I. Ceramic
  - Soft-fired Brick
    - Unglazed--3 complete and 1 fragment

Unit 14, Level 4

- |                         |   |   |
|-------------------------|---|---|
| I. Ceramic              |   |   |
| Soft-fired Brick        |   |   |
| Glazed--18 fragments    |   |   |
| Unglazed--139 fragments |   |   |
| II. Metal               |   |   |
| Hardware--Nails         |   |   |
| 10d machine cut         | 1 |   |
| Unidentified Metal      |   |   |
| Iron/Steel-lump         |   | 2 |
| Melted lead             |   | 1 |

III. Mineral/Composite/Miscellaneous  
Limestone--125.3 gm

Unit 14, Level 4, Area 1

- I. Glass  
Bottle/Jar  
Body Fragments (undecorated)  
Unidentified-light/medium olive green--1
- II. Ceramic  
Decorated White Paste Earthenware  
"Old Blue" transfer printed rim sherd--2
- III. Mineral/Composite/Miscellaneous  
Limestone--124.5 gm

Unit 14, Level 4, Feature 1

- I. Ceramic  
Soft-fired Brick  
Unglazed--7 complete and 14 fragments
- II. Mineral/Composite/Miscellaneous  
Limestone--4.8 gm

Unit 14, Level 4, Feature 1, Subfeature 1

- I. Glass  
Bottle/Jar  
Body Fragment (undecorated)  
Unidentified-dark olive green--1
- II. Ceramic  
Decorated White Paste Earthenware  
"Old Blue" transfer printed base sherd--1
- |                                     | <u>Complete</u> | <u>Fragment</u> |
|-------------------------------------|-----------------|-----------------|
| III. Metal                          |                 |                 |
| Hardware--Construction              |                 |                 |
| Lock washer                         | 1               |                 |
| Hardware--Nails                     |                 |                 |
| 8d machine cut                      | 1               |                 |
| Unidentified Metal                  |                 |                 |
| Iron/Steel-flat                     |                 | 1               |
| Melted lead                         |                 | 3               |
| IV. Mineral/Composite/Miscellaneous |                 |                 |
| Limestone--30.5 gm                  |                 |                 |
| Other--23.1 gm                      |                 |                 |

- V. Prehistoric  
Lithic debitage--1

Unit 14, Level 4, Feature 7

- I. Ceramic  
Soft-fired Brick  
Unglazed--2 complete and 5 fragments

Unit 14, Level 4, Feature 12

- I. Metal  
Hardware--Nails  
8d machine cut--1

Unit 15, Level 2

- I. Glass  
Bottle/Jar  
Body Fragment (undecorated)  
Unidentified-dark olive green--1
- II. Ceramic  
Soft-fired Brick  
Unglazed--4 fragments
- III. Metal  
Hardware--Nails  
Unidentified machine cut--2 fragments  
Unidentified Metal  
Iron/Steel-flat--5 fragments  
Melted lead--3 fragments
- IV. Prehistoric  
Lithic debitage--1

Unit 15, Level 3

- I. Glass  
Bottle/Jar  
Body Fragment (undecorated)  
Unidentified-light/medium olive green--2
- II. Ceramic  
Soft-fired Brick  
Unglazed--2 fragments



III. Metal	Complete	Fragment
Hardware--Nail		
10d	1	
Unidentified		13
Unidentified Metal		
Melted lead		11

IV. Mineral/Composite/Miscellaneous  
Slag--52.2 gm

V. Lithic debitage--1

Unit 16, Level 4

I. Glass  
Plate (window)--6  
Bottle/Jar  
    Body Fragment (undecorated)  
    Unidentified-light/medium olive green--1

Unit 16, Level 4, Area 2

I. Metal  
Hardware--Nail  
    12d machine cut--1

Unit 16, Level 4, Feature 1

I. Glass  
Bottle/Jar  
    Body Fragment (undecorated)  
    Unidentified-dark olive green--1

Unit 16, Level 4, Feature 7

I. Ceramic  
Soft-fired Brick  
    Glazed--3 fragments  
    Unglazed--4 complete and 3 fragments

Unit 16, Level 4, Feature 15

I. Glass  
Bottle/Jar  
    Body Fragments (undecorated)  
    Unidentified-dark olive green--32  
    Base Fragments (empontilled)  
    Alcoholic beverage-dark olive green--13

- II. Ceramic
  - Soft-fired Brick
    - Unglazed--2 fragments

III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Nail		
Machine cut		
8d	1	
10d	2	
12d	1	
Unidentified		4
Hardware--Miscellaneous		
Barstock		1
Unidentified Metal		
Iron/Steel		1
IV. Wood		
Post base		1
V. Mineral/Composite/Miscellaneous		
Charcoal--99.2 gm		
Limestone--40.3 gm		

Unit 17, Level 4

- I. Glass
  - Bottle/Jar
    - Lip/Neck Fragment (applied)
      - Unidentified-light/medium green (nonlead)--1
- II. Ceramic
  - Undecorated White Paste Earthenware body sherd--1
- III. Metal
  - Hardware--Nail
    - Unidentified machine cut--1 fragment
  - Unidentified Metal
    - Iron/Steel-lump--1 fragment

Unit 17, Level 4, Feature 1

- I. Ceramic
  - Soft-fired Brick
    - Unglazed--6 fragments

Unit 17, Level 4, Feature 8

- I. Ceramic
  - Soft-fired Brick
    - Glazed--2 complete
    - Unglazed--4 complete

Unit 18, Surface

- I. Glass
  - Bottle/Jar
    - Body Fragments (undecorated)
      - Unidentified-dark olive green--2

Unit 18, Level 2

- I. Ceramic
  - Soft-fired Brick
    - Unglazed--1 fragment
- II. Metal
  - Arms and Ammunition
    - Shotgun shell--1 fragment
- III. Prehistoric
  - Lithic debitage--1

Unit 18, Level 3

- I. Metal
  - Unidentified Metal
    - Melted lead--1 fragment
- II. Mineral/Composite/Miscellaneous
  - Cinder--28.0 gm

Unit 18, Level 4

- |                                      |                 |                 |
|--------------------------------------|-----------------|-----------------|
| I. Ceramic                           |                 |                 |
| Soft-fired Brick                     |                 |                 |
| Unglazed--1 fragment                 |                 |                 |
| Decorated White Paste Earthenware    |                 |                 |
| Painted polychrome base sherd--1     |                 |                 |
| II. Metal                            | <u>Complete</u> | <u>Fragment</u> |
| Hardware--Construction               |                 |                 |
| Disk washer                          |                 | 1               |
| Hardware--Nail                       |                 |                 |
| Machine cut                          |                 |                 |
| 5d                                   | 3               |                 |
| 8d                                   | 3               |                 |
| Unidentified                         |                 | 1               |
| Unidentified Metal                   |                 |                 |
| Iron/Steel-lump                      |                 | 3               |
| Melted lead                          |                 | 3               |
| III. Mineral/Composite/Miscellaneous |                 |                 |
| Cinder--33.7 gm                      |                 |                 |

IV. Prehistoric  
Lithic debitage--2

Unit 18, Level 4, Area 1

I. Glass		
Plate (window)		
Bottle/Jar		
Body Fragment (undecorated)		
Unidentified		
Light/medium blue (aqua) (nonlead)--1		
Light/medium olive green--1		
II. Ceramic		
Soft-fired Brick		
Glazed--4 fragments		
Unglazed--20 fragments		
Decorated White Paste Earthenware		
Painted polychrome rim sherd--1		
III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Construction		
Unidentified spike		6
Hardware--Nail		
Machine cut		
5d	1	
10d	1	
Unidentified	5	
Hardware--Miscellaneous		
Barstock		1
Unidentified Metal		
Iron/Steel-lump		16
Melted lead		5
IV. Mineral/Composite/Miscellaneous		
Cinder--59.1 gm		
Limestone--14.6 gm		
V. Prehistoric		
Lithic debitage--29		

Unit 18, Level 4, Area 2

I. Ceramic	
Soft-fired Brick	
Unglazed--4 fragments	
II. Metal	
Hardware--Construction	
Iron tack--1 fragment	
Unidentified Metal	
Melted lead--4 fragments	

- III. Mineral/Composite/Miscellaneous  
Cinder--16.3 gm

Unit 18, Level 4, Area 3

- I. Ceramic  
Soft-fired Brick  
Glazed--4 fragments  
Unglazed--21 fragments
- II. Metal  
Hardware--Nail  
Unidentified machine cut--1 fragment
- III. Mineral/Composite/Miscellaneous  
Limestone--44.4 gm
- IV. Prehistoric  
Lithic debitage--1

Unit 18, Level 4, Area 4

- I. Prehistoric  
Lithic  
Roughout--1  
Biface--1  
Debitage--11

Unit 18, Level 4, Area 6

- I. Mineral/Composite/Miscellaneous  
Mortar--6.57 gm

Unit 19, Level 3

- I. Glass  
Bottle/Jar  
Body Fragments (undecorated)  
Unidentified  
Light/medium olive green--1  
Dark olive green--1
- II. Ceramic  
Soft-fired Brick  
Glazed--8 fragments  
Unglazed--11 fragments  
Decorated White Paste Earthenware  
"Old Blue" transfer printed body sherd--2

III. Metal	Complete	Fragment
Hardware--Nail		
Hand wrought		1
Machine cut		
4d	1	
8d	5	
10d	5	
12d	2	
Unidentified		7
Unidentified Metal		
Iron/Steel-flat		1
Melted lead		12
IV. Mineral/Composite/Miscellaneous		
Charcoal--0.1 gm		
Limestone--1.0 gm		
Slag--10.0 gm		
V. Prehistoric		
Lithic firecracked rock--2		

Unit 19, Level 4

I. Glass		
Bottle/Jar		
Body Fragment (undecorated)		
Unidentified		
Light/medium blue (aqua) (nonlead)--1		
Light/medium olive green--2		
II. Ceramic		
Soft-fired Brick		
Glazed--20 fragments		
Unglazed--54 fragments		
III. Metal	Complete	Fragment
Hardware--Nail		
Hand wrought	3	1
Machine cut		
6d	1	
8d	3	
9d	1	
10d	1	
16d	1	
Unidentified		42
Hardware--Miscellaneous		
Barstock		1
Unidentified Metal		
Brass-melted		2
Iron/Steel		
Flat		10
Melted		5
Melted lead		67

- IV. Bone
  - Unmodified--1 fragment
- V. Mineral/Composite/Miscellaneous
  - Charcoal--46.4 gm
  - Limestone--6.9 gm
  - Slag--16.9 gm
- VI. Prehistoric
  - Lithic
    - Debitage--5
    - Firecracked rock--4

Unit 19, Level 4, Area 1

- I. Glass
  - Bottle/Jar
    - Base Fragment (empontilled)
      - Alcoholic beverage-dark olive green--14
- II. Ceramic
  - Soft-fired Brick
    - Unglazed--3 fragments
- III. Metal
 

	<u>Complete</u>	<u>Fragment</u>
Hardware--Construction		
Unidentified bolt	1	
Wood screw		1
Hardware--Nail		
Machine cut		
6d	1	
8d	2	
Unidentified		12
Unidentified Metal		
Brass-scrap		5
Melted lead		96
- IV. Mineral/Composite/Miscellaneous
  - Charcoal--11.8 gm
  - Slag--5.8 gm

Unit 19, Level 4, Area 2

- I. Glass
  - Bottle/Jar
    - Body Fragment (undecorated)
      - Unidentified-light/medium olive green--4
- II. Metal
 

	<u>Complete</u>	<u>Fragment</u>
Hardware--Nails		
Machine cut		
10d	1	

	<u>Complete</u>	<u>Fragment</u>
Unidentified		1
Unidentified Metal		
Melted lead		1
III. Mineral/Composite/Miscellaneous		
Limestone--60.8 gm		

Unit 19, Level 4, Area 4

I. Glass		
Plate (window)--2		
Bottle/Jar		
Body Fragments (undecorated)		
Unidentified-light/medium olive green--1		
II. Ceramic		
Soft-fired Brick		
Unglazed--9 fragments		
Undecorated White Paste Earthenware body sherds--1		
III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Nails		
Machine cut		
8d	1	
Unidentified		1
Unidentified Metal		
Iron/Steel		1
Melted lead		5
IV. Mineral/Composite/Miscellaneous		
Cinder--1.1 gm		
V. Prehistoric		
Lithic debitage--18		

Unit 19, Level 4, Feature 10

I. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Nail		
Hand wrought		1
Machine cut		
5d	1	
6d	1	
8d	5	
12d	1	
Unidentified		4
Unidentified Metal		
Brass-strip		1
Melted lead		27



- II. Mineral/Composite/Miscellaneous  
Charcoal--29.5 gm
- III. Prehistoric  
Lithic biface--1

Unit 19, Level 4, Feature 10, Subfeature 1

- I. Metal  
Hardware--Nail  
Unidentified machine cut--5 fragments
- II. Mineral/Composite/Miscellaneous  
Charcoal--0.3 gm
- III. Prehistoric  
Lithic  
Biface--1  
Debitage--39  
Undecorated Ceramic--6

Unit 20, Surface

- I. Glass  
Plate (window)--1
- II. Prehistoric  
Lithic firecracked rock--2

Unit 20, Level 4, Area 2

- I. Glass  
Plate (window)--10  
Bottle/Jar  
Lip/Neck Fragments (applied)  
Alcoholic beverage-light/medium olive green--1  
Body Fragments  
Decorated  
Alcoholic beverage-light/medium blue (aqua)--1  
Undecorated  
Alcoholic beverage-light/medium olive green--1  
Unidentified  
Clear (nonlead)--1  
Light/medium olive green--2  
Dark olive green--2  
Unidentified-melted--1
- II. Ceramic  
Soft-fired Brick  
Unglazed--1 fragment  
Glazed--2 fragments

Decorated White Paste Earthenware  
 Painted polychrome base sherd--1  
 "Old Blue" transfer printed base sherd--1

III. Metal	Complete	Fragment
Hardware--Nail		
Hand wrought		2
Machine cut		
6d	3	
8d	5	
Unidentified		32
Hardware--Plumbing		
Faucet	1	
Hardware--Miscellaneous		
Miscellaneous machine part		1
Unidentified Metal		
Iron/Steel-flat		12
Melted lead		2

IV. Prehistoric  
 Lithic debitage--1

Unit 21, Surface

- I. Glass  
 Bottle/Jar  
     Body Fragments (undecorated)  
         Alcoholic beverage-light/medium olive green--1  
         Unidentified-dark olive green--1

Unit 21, Level 2

- I. Glass  
 Plate (window)--2  
 Bottle/Jar  
     Body Fragments (undecorated)  
         Alcoholic beverage-light/medium olive green--1  
         Unidentified  
             Light/medium olive green--1  
             Dark olive green--1
- II. Ceramic  
 Soft-fired Brick  
     Glazed--1 fragment  
     Unglazed--2 fragments
- III. Metal  
 Hardware--Nail  
     Unidentified machine cut--2 fragments  
 Unidentified Metal  
     Melted lead--1 fragment

IV. Mineral/Composite/Miscellaneous  
Charcoal--2.9 gm  
Cinder--6.0 gm

V. Prehistoric  
Undecorated Ceramic--3

Unit 21, Level 4

I. Glass  
Plate (window)--1

II. Ceramic  
Soft-fired Brick  
Glazed--2 fragments  
Unglazed--2 fragments

	<u>Complete</u>	<u>Fragment</u>
III. Metal		
Clothing		
Self-shank button	2	
Hardware--Nail		
Unidentified machine cut		1
Unidentified Metal		
Melted lead		1

IV. Mineral/Composite/Miscellaneous  
Limestone--3.9 gm

Unit 21, Level 4, Area 1

I. Ceramic  
Soft-fired Brick  
Glazed--1 fragment  
Unglazed--7 fragments  
Decorated White Paste Earthenware  
Painted polychrome rim sherd--1

	<u>Complete</u>	<u>Fragment</u>
II. Metal		
Hardware--Construction		
Cut spike	1	
Hardware--Nail		
Machine cut		
10d	1	
Unidentified		4
Tools		
Chisel	1	
Unidentified Metal		
Iron/Steel-flat		3

III. Prehistoric  
Lithic  
Utilized debitage--1  
Unutilized debitage--1

Unit 21, Level 4, Area 2

I. Glass		
Plate (window)--8		
Bottle/Jar		
Body Fragments (undecorated)		
Alcoholic beverage-light/medium olive green--1		
Unidentified		
Light/medium olive green--2		
Dark olive green--4		
II. Ceramic		
Decorated White Paste Earthenware		
Painted polychrome body sherd--1		
Painted polychrome base sherd--1		
III. Metal		
	<u>Complete</u>	<u>Fragment</u>
Hardware--Construction		
Machine bolt		1
Hardware--Nail		
10d	1	
Unidentified		7
Hardware--Miscellaneous		
Barstock		1
Unidentified Metal		
Iron/Steel-flat		4
Melted lead		7
IV. Prehistoric		
Lithic debitage--1		
Undecorated ceramic--4		

Unit 22, Level 2

I. Glass		
Plate (window)--16		
Bottle/Jar		
Body Fragment (undecorated)		
Unidentified-light/medium olive green--1		
II. Ceramic		
Decorated White Paste Earthenware		
Painted polychrome body sherd--3		
III. Metal		
	<u>Complete</u>	<u>Fragment</u>
Hardware--Nail		
Unidentified machine cut		1
Unidentified Metal		
Brass-scrap		1
Iron/Steel-flat		1
Melted lead		4

IV. Prehistoric  
Lithic debitage--7

Unit 22, Level 3

I. Glass		
Plate (window)--3		
Bottle/Jar		
Body Fragments (undecorated)		
Unidentified		
Light/medium olive green--3		
Dark olive green--2		
II. Ceramic		
Soft-fired Brick		
Unglazed--6 fragments		
Decorated White Paste Earthenware		
"Old Blue" transfer printed body sherd--1		
"Old Blue" transfer printed base sherd--1		
III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Construction		
Wood screw		1
Hardware--Nail		
Hand wrought		1
Machine cut		
6d	1	
7d	3	
9d	2	
10d	2	
20d	1	
Unidentified		13
Unidentified Metal		
Brass-strip		1
Iron/Steel		
Flat		5
Lump		3
Melted lead		36
IV. Mineral/Composite/Miscellaneous		
Cinder--2.0 gm		
V. Prehistoric		
Lithic debitage--2		

Unit 22, Level 4

I. Glass
Plate (window)--4
Bottle/Jar
Body Fragments (undecorated)
Unidentified

Light/medium blue (aqua) (nonlead)--1  
 Light/medium olive green--4  
 Dark olive green--7

II. Ceramic

Soft-fired Brick

Glazed--3 fragments

Unglazed--13 fragments

Decorated White Paste Earthenware

Painted polychrome rim sherd--1

"Old Blue" transfer printed body sherd--2

"Old Blue" transfer printed base sherd--3

Undecorated White Paste Earthenware base sherd--1

III. Metal

Clothing

Self-shank button

Hardware--Construction

Iron tack

Hardware--Nail

Machine cut

5d

8d

9d

12d

Unidentified

Hardware--Construction

Barstock

Tools

Hammer part

Unidentified Metal

Iron/Steel

Flat

Lump

Melted lead

Complete

Fragment

1

3

2

6

3

7

32

1

1

6

4

187

IV. Mineral/Composite/Miscellaneous

Mortar--6.0 gm

V. Prehistoric

Lithic debitage--5

Unit 23, Level 2

I. Glass

Plate (window)--6

Bottle/Jar

Body Fragment (undecorated)

Unidentified-dark olive green--1

II. Ceramic

Decorated White Paste Earthenware

"Old Blue" transfer printed base sherd--2

III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Nail		
Machine cut		
8d	1	
12d	1	
Unidentified		11
Tools		
File	1	
Unidentified Metal		
Iron/Steel		
Flat		1
Melted		1

IV. Mineral/Composite/Miscellaneous  
Limestone--69.3 gm

V. Prehistoric  
Lithic debitage--1

Unit 23, Level 4

I. Prehistoric  
Lithic debitage--1

Unit 23, Level 4, Feature 1

I. Ceramic  
Soft-fired Brick  
Unglazed--5 fragments

Unit 24, Level 2

I. Glass  
Plate (window)--6  
Bottle/Jar  
    Body Fragments (undecorated)  
    Unidentified-light/medium olive green--2

II. Ceramic  
Decorated White Paste Earthenware  
    Painted polychrome body sherd--1  
    "Old Blue" transfer printed rim sherd--2  
    "Old Blue" transfer printed body sherd--1

III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Door/Window		
Other		1
Hardware--Nail		
Machine cut		
12d	1	
Unidentified		12

	Tools	<u>Complete</u>	<u>Fragment</u>
	File	1	
	Unidentified metal		
	Iron/Steel-flat		3
IV.	Prehistoric		
	Lithic debitage--4		
<u>Unit 25, level 2</u>			
I.	Ceramic		
	Soft-fired Brick		
	Unglazed--2 fragments		
II.	Metal	<u>Complete</u>	<u>Fragment</u>
	Hardware--Nail		
	Machine cut		
	9d	2	
	16d	1	
	Unidentified		1
<u>Unit 25, Level 3</u>			
I.	Ceramic		
	Soft-fired Brick		
	Glazed--10 fragments		
	Unglazed--44 fragments		
II.	Metal	<u>Complete</u>	<u>Fragment</u>
	Hardware--Nail		
	Machine cut		
	8d	3	
	10d	1	
	Unidentified		10
III.	Mineral/Composite/Miscellaneous		
	Cinder--17.6 gm		
	Other--7.1 gm		
IV.	Prehistoric		
	Lithic debitage--3		
	Firecracked rock--2		



Unit 25, Level 4

I.	Metal	<u>Complete</u>	<u>Fragment</u>
	Hardware--Nail		
	Unidentified machine cut		2
	Unidentified Metal		
	Iron/Steel-lump		1

Unit 25, Level 4, Feature 9

I.	Glass		
	Plate (window)--82		
	Bottle/Jar		
	Body Fragment		
	Alcoholic beverage-light/medium green decorated--4		
	Unidentified (undecorated)		
	Light/medium blue (nonlead) (aqua)--2		
	Light/medium olive green--7		
	Base Fragment		
	Alcoholic beverage--dark olive green		
	Empontilled--2		
	Unmarked--1		
	Inkwell-dark olive green--1		
	Tableware		
	Tumbler-undecorated lead glass rim--1		
	Tumbler-undecorated lead glass body--1		
II.	Ceramic		
	Soft-fired Brick		
	Glazed--12 fragments		
	Unglazed--105 fragments		
	Decorated/unmarked smoking pipe--1 fragment		
	Decorated White Paste Earthenware		
	Brown transfer printed base sherds--1		
III.	Metal	<u>Complete</u>	<u>Fragment</u>
	Container		
	Round body tin can		4
	Hardware--Construction		
	Machine bolt		2
	Square nut	2	
	Iron tack	168	64
	Disk washer		1
	Hardware--Nail		
	Hand wrought	15	6
	Machine cut		
	3d	3	
	4d	2	
	6d	9	
	7d	7	

8d	44	
9d	5	
10d	17	
12d	9	
16d	2	
Unidentified		160
Unidentified fragments		217
Hardware--Miscellaneous		
Chain		1
Tool		
Hammer part		1
File		1
Blade		1
Miscellaneous machine part		1
Unidentified Metal		
Brass		
Convex		2
Scrap		7
Strip		1
Cylinder		3
Iron/Steel		
Flat		116
Lump		44
Melted lead		216

- IV. Bone  
Unmodified--5 fragments
- V. Mineral/Composite/Miscellaneous  
Charcoal--539.1 gm  
Cinder--5,029.8 gm
- VI. Prehistoric  
Lithic debitage--43

Unit 26, Level 2

I.	Glass		
	Bottle/Jar		
	Body Fragment (undecorated)		
	Alcoholic beverage-light/medium olive green--1		
	Unidentified-dark olive green--1		
II.	Metal	Complete	Fragment
	Hardware--Nail		
	Machine cut		
	9d	1	
	Unidentified		5
	Hardware--Miscellaneous		
	Ring/Loop	1	
	Unidentified Metal		
	Iron/Steel-flat		1

Unit 26, Level 3

- I. Ceramic  
Soft-fired Brick  
Glazed--5 fragments  
Unglazed--2 complete and 8 fragments

II.	Metal	<u>Complete</u>	<u>Fragment</u>
	Hardware--Nail		
	Machine cut		
	6d	1	
	8d	1	
	Unidentified		4
	Unidentified metal		
	Brass		
	Convex		1
	Melted		1
	Scrap		1
	Iron/Steel-flat		2
	Melted lead		8

Unit 26, Level 4

- I. Ceramic  
Soft-fired Brick  
Glazed--2 fragments

II.	Metal	<u>Complete</u>	<u>Fragment</u>
	Hardware--Construction		
	Machine bolt	1	
	Hardware--Nail		
	Machine cut		
	8d	2	
	Unidentified		3
	Tool		
	Chisel	1	
	Unidentified Metal		
	Iron/Steel		
	Flat		15
	Lump		6
	Melted lead		27

Unit 26, Level 4, Area 1

- I. Glass  
Bottle/Jar  
Body Fragment (undecorated)  
Unidentified-dark olive green--1

II. Ceramic  
Soft-fired Brick  
Unglazed--2 fragments

		<u>Complete</u>	<u>Fragment</u>
III.	Metal		
	Hardware--Construction		
	Square nut	1	
	Unidentified screw		2
	Wrought staple	1	
	Iron tack	2	
		<u>Complete</u>	<u>Fragment</u>
	Hardware--Nail		
	Machine cut		
	5d	1	
	6d	3	
	9d	2	
	12d	7	
	16d	2	
	Unidentified		41
	Hardware--Miscellaneous		
	Chain		1
	Iron wire		1
	Tool		
	Hammer part	1	
	Unidentified metal		
	Brass		
	Convex		2
	Melted		4
	Strip		2
	Melted lead		23

IV. Prehistoric  
Lithic debitage--2

Unit 26, Level 4, Area 4

I. Glass  
Plate (window)--2  
    Body Fragment (undecorated)  
    Unidentified  
        Light/medium olive green--1  
        Dark olive green--6

II. Ceramics  
Soft-fired Brick  
    Glazed--2 fragments  
    Unglazed--20 fragments

III.	Metal	<u>Complete</u>	<u>Fragment</u>
	Hardware--Nail		
	Machine cut		
	9d	1	
	Unidentified		14
	Hardware--Plumbing		
	Faucet	1	
	Unidentified Metal		
	Brass-melted		3
	Melted lead		10
IV.	Mineral/Composite/Miscellaneous		
	Charcoal--4.9 gm		
	Cinder--5.5 gm		
	Limestone--24.9 gm		
V.	Prehistoric		
	Lithic debitage--1		

Unit 26, Level 4, Area 6

I.	Metal	<u>Complete</u>	<u>Fragment</u>
	Container		
	Unidentified tin can body		1
	Hardware--Nail		
	Machine cut		
	8d	1	
	10d	1	
	16d	1	
	Unidentified machine cut		8
	Hardware--Miscellaneous		
	Barstock		1
	Unidentified metal		
	Iron/Steel		
	Flat		31
	Lump		2
	Melted lead		10

Unit 26, Level 4, Feature 10

I.	Glass		
	Bottle/Jar		
	Body Fragment (undecorated)		
	Unidentified-light/medium olive green--1		
II.	Metal	<u>Complete</u>	<u>Fragment</u>
	Hardware--Construction		
	Wrought staple	1	
	Hardware--Nail		
	Machine cut		
	6d	1	
	8d	2	
	9d	4	

10d	1	
Unidentified		9
Unidentified Metal		
Melted lead		6

Unit 26, Level 4, Feature 11

- I. Ceramics  
 Soft-fired brick  
 Unglazed--2 complete

Unit 27, Level 2

- I. Metal  
 Unidentified metal  
 Pewter--1 fragment

Unit 27, Level 3

- I. Glass  
 Plate (window)--1
- II. Ceramic  
 Decorated White Paste Earthenware  
 Simple banded slip decorated rim sherd--1

III. Metal	<u>Complete</u>	<u>Fragment</u>
Hardware--Nail		
Unidentified machine cut		3
Hardware--miscellaneous		
Iron wire		1
Unidentified Metal		
Iron/Steel		
Circular		1
Flat		1
Tin		1

Unit 27, Level 4, Feature 1

- I. Glass  
 Bottle/Jar  
 Body Fragment (undecorated)  
 Unidentified  
 Light/medium blue (nonlead) (aqua)--4  
 Dark olive green--3

II.	Metal	Complete	Fragment
	Hardware--Nail		
	Machine cut		
	8d	1	
	9d	2	
	10d	2	
	12d	3	
	Unidentified		5
	Hardware--Miscellaneous		
	Chain		1
	Ring/Loop	1	
	Unidentified Metal		
	Brass-strip		1
	Iron/Steel		
	Flat		2
	Lump		8
	Melted lead		3
III.	Mineral/Composite/Miscellaneous		
	Cinder--26.4 gm		

Unit 28, Level 2

- I. Ceramic
  - Decorated White Paste Earthenware
  - "Old Blue" transfer printed rim sherd--1
- II. Prehistoric
  - Lithic debitage--1

Unit 28, Level 4

- I. Metal
  - Hardware--Nail
  - Unidentified machine cut nail--1 fragment

APPENDIX 3  
FEATURE DESCRIPTIONS

Feature 1 (Figures 2, 22, 25, 27, 28, 31-33)

Feature 1 consists of four sections that together form the southern and eastern outer walls of the structure and includes the northernmost foundation wall exposed in the excavations. As noted previously, this northern foundation wall is not the actual northern limit of the structure. Because Feature 1 is very complex, it was divided into four sections during the course of the excavation in an attempt to reduce its complexity. These divisions have been maintained and are as follows: 1) Feature 1--South Wall, 2) Feature 1--East Wall, 3) Feature 1--North Wall, and 4) Feature 1--Builder's Trench. During the analysis of 22Lo741, it was further necessary to subdivide the east wall and the associated builder's trench into two sections, each relating to different phases of construction.

Feature 1--South Wall consisted of the disturbed bottom course of bricks comprising the southern external wall of the structure. The degree of disturbance is evident in Figure 4. At its base, the foundation was three courses of bricks wide (ca. 30 cm). The original height of the wall is indeterminate. Of those bricks still present, most were either half or three-quarter size brick fragments, all broken longitudinally. Whole bricks were only utilized in the construction of the southeastern corner of the structure, where they were laid with their long axes paralleling the wall. The long axis of the wall was oriented 12° north of East.

Evidence for a builder's trench associated with the south wall was not observed in plan in either of the units straddling it. The only evidence for the trench appeared in the profile between Units 17 (S22 W10) and 23 (S22 W8) on the northern side of the brick wall where it exhibited a flat bottom with a steeply sloping side (70°); the southern edge of the builder's trench was not present. A yellowish brown (10YR5/4) sand mottled with patches and lenses of dark yellowish brown (10YR4/4) and dark brown (10YR3/3) sand composed the fill of the builder's trench, which produced no artifacts. In profile, the edges of the discoloration were poorly defined. The builder's trench was 15 cm wide at the base, 19 cm wide at the top, and a maximum of 10 cm deep; it was excavated into sterile subsoil.

Based on morphological characteristics, Feature 1--East Wall has been divided into two discrete sections, Section A and Section B. Section A consisted of the southern half of the structure's eastern wall and was constructed entirely of brick. This portion of the wall was three courses of brick high and wide and measured 2.66 m long (N/S), 42 cm wide, and 20-25 cm deep. An unknown number of vertical courses were removed before excavation. Although the remains of the wall were not tall enough to identify the specific bonding system employed, it does





Figure 31. Overall excavation from the west (looking east).



Figure 32. Overall excavation from the east (looking west).

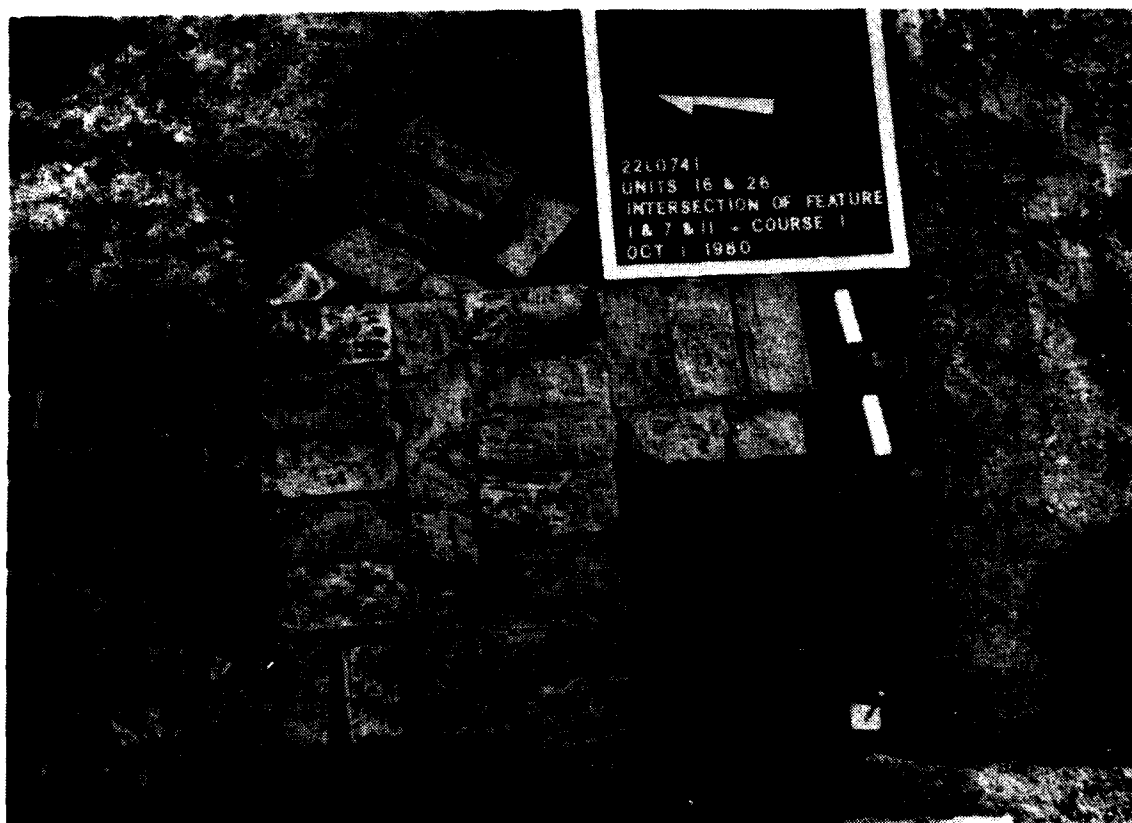


Figure 33. Junction of Features 1, 7, and 11.

appear to be related to the American common bond system (McKee 1973:49). Nearly all whole header bricks were utilized in the basal course between the junction of the southern wall and the brick foundation at the northern end of Section A. There were several stretcher bricks on the inside of the southern edge of the wall. The junction with Feature 1--South Wall consisted of two stretcher bricks laid end to end (N/S) and four rows deep (E/W). On the north end, the basal course of bricks shift from header bricks to one row of six stretcher bricks followed by a row of six fragmentary (three half and three three-quarter) header bricks. This in turn was followed by an additional row of six stretcher bricks. Apparently this was the junction between Features 1 and 11. The basal course of bricks was 40 cm wide and laid directly on the sterile subsoil floor of the associated builder's trench. The bricks in the upper two courses were laid with their long axes paralleling that of the wall. These upper two courses were constructed mainly of half bricks; whole bricks tended to be located in the eastern vertical course of brick and at the southern end of the wall where it joined the south wall of the structure. The apparent junction between Features 1 and 11 was not extant above the basal course of bricks. Faint traces of lime mortar used to bond the bricks were encountered sporadically as the feature was dismantled. The long axis of the wall was oriented 12° west of North.

Section B is immediately north of Section A and consists of a burned wooden foundation line 3.82 m long (N/S). Ranging between 45 cm and 70 cm wide with a mean width of about 60 cm, Section B appeared in plan as a linear dark brown (10YR3/3) sand discoloration containing pieces of charcoal and a large number of small to moderate sized brick fragments, none of which appeared to be in situ. A 2-5 cm wide band of charcoal lined both sides of the discoloration. This section of the eastern wall extended from the northern edge of Section A northward to the limits of the excavation. The northern end of the wall was not recovered. Up to the point where Feature 1--North Wall joined the eastern wall, the edges of the feature were clearly defined, but north of this point the edges became amorphous and poorly defined. In profile, Section B has a shallow basin shape 12 cm deep. The profile also exhibits an external ring of charcoal revealed after removal of the dark brown fill, indicating that the feature was wood-lined. Unfortunately, the remains were too fragmentary to determine the size and type of boards utilized in construction. This section of the wall was set into the light yellowish brown (10YR6/4) sand fill of the northern half of the Feature 1--Builder's Trench. The long axis of Section B is also oriented along a line 12° west of North.

Feature 1--North Wall is also a burned brick rubble-filled wooden foundation extending westward from and perpendicular to the eastern wall of the structure. In plan, the wall was identical to Section B of Feature 1--East Wall with a dark brown (10YR3/3) sand matrix containing a large number of brick and charcoal fragments throughout. This portion of the foundation also had a shallow, basin shaped profile 10 cm deep. The concavity of the north wall profile was not as pronounced as that of the east wall. Before the removal of the dark brown sand and brick

rubble matrix, this section of Feature 1 measured 2.15 m long (E/W) and varied from 20-50 cm wide with a median width of 32 cm. After the removal of the matrix, a charred section of wooden foundation 1.9 m long and 27 cm wide was exposed (Figure 2). Although a definitive identification of the number and size of the boards involved was not possible, it did appear that there were at least two boards lying side by side paralleling the long axis of the wall. Additionally, a single fragmentary portion of a cross-member tying the boards together was exposed at the western end of the feature. The fragment was 19 cm long (N/S), 4 cm wide, and 2.5 cm thick. In addition to the charred boards, the basal remnants of a possible brick and wooden support feature (pier?) were also exposed at the eastern end of the junction between Feature 1--North Wall and East Wall. The anomaly was oval in shape (52 cm E/W by 38 cm N/S) and consisted of a thin (5 cm) concentration of brick rubble surrounded by a band of charcoal 2-3 cm wide. Along with the entire wall, this anomaly was set into the light yellowish brown (10YR6/4) sand fill of the associated builder's trench.

Feature 1--Builder's Trench has also been divided into two sections, A and B, that are associated with the two sections of the eastern wall of the structure. Section A, associated with the brick portion of the wall, was further subdivided into that portion lying west of the brick foundation and that portion lying between the wall and Feature 7. Because the eastern limit of Feature 1 in this area was arbitrarily set along the eastern edge of the brick wall, this latter portion of the builder's trench is described along with Feature 7. The builder's trench parallels the brick foundation line, becoming slightly wider at the northern end. Section A of the builder's trench measured 2.89 m long, 49 cm wide at its southern end, 67 cm wide at its northern end, and 15 cm deep. The western side of the builder's trench had a flat bottom and steeply sloping sides (approximately 75°) with clearly defined edges. A matrix of brown (10YR4/3) to strong brown (7.5YR4/6) sand with a moderate amount of small brick fragments and charcoal flecking composed the fill of the builder's trench.

The northern portion of the Feature 1--Builder's Trench (Section B) is associated with the wooden portion of the structure (both the eastern and northern sections of Feature 1). This section is characterized by a light yellowish brown (10YR6/4) sand that covers virtually the entire floor of the northern half of the structure. In profile, the builder's trench has a flat bottom and extends 20-28 cm below the base of the charred wall. On the eastern side of the foundation, the edge of the builder's trench is nearly vertical. At its base it was 15 cm wide, while at the top of the feature it was 1.04 m wide at the northern end tapering to 50 cm wide at its southern end. The southern end of the builder's trench abuts the northern edge of the builder's trench associated with Feature 7. On the western side of the foundation, the edge of the builder's trench slopes more moderately (approximately 40-45°), measuring 7.5 cm wide at its base and 25 cm wide at the top of the feature.

Excavators uncovered an uncharred section of a board lying directly under the charred remnants of the east wall at the base of the builder's trench. The board measured 2.81 m long (N/S), 38 cm wide (E/W), and 5 cm thick. Although the board was badly deteriorated, it appeared to have been sawed. It lay directly on the sterile subsoil.

West of the eastern wall and its builder's trench, the light yellowish brown sand covered nearly the entire floor of the north half of the structure. Under the Feature 1--North Wall, the sand is relatively thin (approximately 5-10 cm) and gradually thickens to the north and south of the wall. The sand floor also tapers westward until it ends at the western end of Feature 1. Artifacts recovered from Feature 1 are listed in Appendix 2 under the individual units.

#### Feature 2

Initially, Feature 2 was identified as a long linear disturbance in the western one-third of Unit 6 (S4 W8). Excavation revealed it to be nothing more than a natural low spot in Level 4. Feature 2 is noncultural in origin. Artifacts recovered from this area are listed separately with Unit 6 in Appendix 2.

#### Feature 3

Before excavation, Feature 3 was identified as a very dark grayish brown (10YR3/2) clay loam disturbance located in the southeast quarter of Unit 8 (S12 W8), but it proved to be recently disturbed and redeposited soil from Level 3. It appears to have been the former location of a large tree. Artifacts recovered from this area are listed separately with Unit 8 in Appendix 2.

#### Feature 4 (Figures 2 and 24)

Feature 4, located in Unit 13 (S18 W4), is the "builder's trench" associated with Feature 7 (the brick platform) and was only encountered along the northern edge and the northern half of the eastern edge of Feature 7. If the builder's trench was present along the southern edge of Feature 7, heavy equipment obliterated it during channel clearing operations. The matrix of Feature 4 consisted of a uniform yellowish brown (10YR5/6) to dark yellowish brown (10YR4/6) silty sand. The edges of Feature 4 parallel those of Feature 7. Outer boundaries of the feature appeared near the base of Level 4 and were clearly defined, but the basal boundary was vague and gradually faded into the yellowish brown (10YR5/6) sand comprising level 5.

Feature 4 is associated with the construction of Feature 7 and the foundation walls of the structure (Feature 1). The builder's trench appears to have been cut slightly into the terrace edge to provide an even floor for construction purposes at the same level as the prepared base for the walls of the structure. The top of the feature appeared at the same level as Feature 6 (a postmold) and the top of Feature 7, indicating that after construction of the brick portion of the

structure, the builder's trench was filled in order to restore the original ground contours.

The Appendix 2 lists artifacts recovered from the feature. Measurements of the feature are as follows.

Length: 2.75 m E/W  
Width: North side: 0.38 m N/S  
East side: 0.24 m E/W  
Maximum Depth: 0.52 m

#### Feature 5

Located in Unit 12 (S20 W4), Unit 13 (S18 W6), and originating in Level 4, Feature 5 refers to the brick rubble overlying Feature 7 directly below the disturbed levels. A very compact yellowish brown (10YR5/8) sand mixed with soft-fired brick rubble comprised the matrix of the feature. The brick rubble composed 50-70% of the feature matrix. Feature 5 consists of the disturbed upper portions of the brick platform (Feature 7), dating to the period after occupation of 22Lo741 but before the initial clearing of the navigation channel. It has been interpreted as being the result of salvaging activities at 22Lo741 and natural decomposition of the soft-fired brick. Heavy machinery truncated the southern end of the feature.

Appendix 2 lists artifacts recovered from the feature. Measurements are as follows.

Length: 2.6 m N/S  
Width: 1.4 m E/W  
Maximum Depth: 0.27 m

#### Feature 6 (Figures 2 and 34)

Feature 6 is a square post hole consisting of two discrete sections: the post hole and the postmold. It is located in Unit 13 (S18 W6) and originated near the base of Level 3, penetrating both Levels 4 and 5. In plan, the feature is rectangular and showed no evidence of the two sections, but the profile displayed clearly the post hole and associated postmold (Figure 16). The post hole into which the post was set had straight sides and a flat bottom. A yellowish brown (10YR5/8) sand mottled with a minor amount of yellowish brown (10YR5/4) sand composed the matrix of the post hole. This portion of the feature was sterile except for the soft-fired brick chinking inserted around the post at the time of construction; the chinking consisted of soft-fired brick rubble ranging in size from half-bricks to small fragments less than 1 cm in diameter. The postmold was distinguished from the post hole primarily by the brick chinking. It was circular with straight sides and tapered bottom. The matrix of the postmold also consisted of a light yellowish brown (10YR5/8) sand mottled with a minor amount of yellowish brown (10YR5/4) sand. A few small brick fragments were also mixed in the postmold matrix.

Appendix 2 lists artifacts recovered from the feature. Measurements of the two sections are as follows.

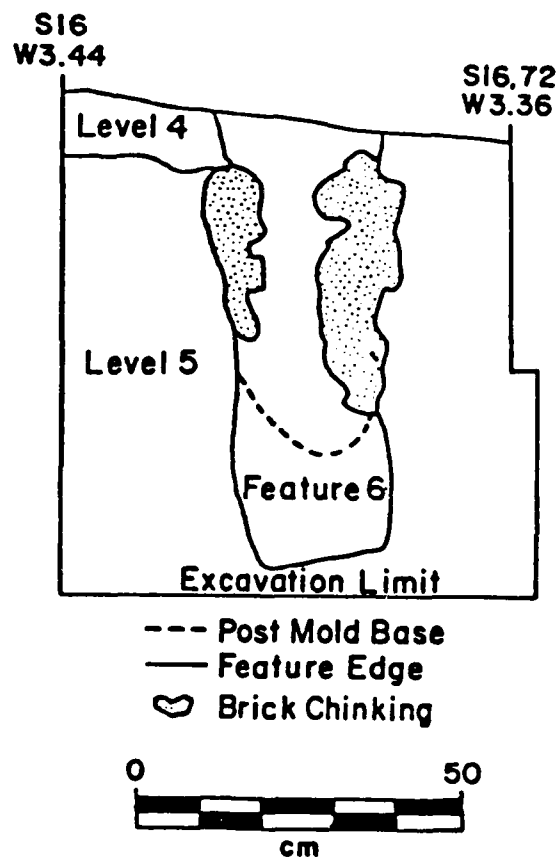


Figure 34. Feature 6 (postmold) profile.

Postmold      Length: 0.20 m E/W  
                 Width: 0.15 m N/S  
                 Maximum Depth: 0.54 m

Post Hole      Length: 0.25 m E/W  
                 Width: 0.20 m N/S  
                 Maximum Depth: 0.73 m

Feature 7 Figures 2, 25, 27, 31-33, 35)

Feature 7 consists of the brick platform located on the eastern side of the structure and the two associated short walls that connect the platform to Feature 1. The discussion of this feature will also include the small area of fill between Features 1 and 7. The southern edge of the feature was truncated during recent channel clearing operations, while the interior of the western half of the feature appears to have been disturbed sometime shortly after the abandonment of the structure, perhaps by salvaging activities. Measuring 2.53 m long (E/W) and 2.0 m wide (N/S), the platform was a minimum of 40 cm in height; the original height of the platform is indeterminate. The long axis (E/W) of the feature is oriented approximately 12° north of East. Each of the five courses of brick composing the feature was stepped in approximately 6 cm. The lowest course of bricks was laid directly on the sterile subsoil forming the floor of the associated builder's trench (Feature 4).

The basal course of bricks is composed entirely of whole bricks. Around the edges of the feature, all are header bricks except at the southern edge, which is not present. On the interior, nearly all of the bricks were laid with their long axes perpendicular to the long axis of the feature. In the southeastern quarter, the bricks were laid with their long axes paralleling that of the feature.

Course 2 exhibited whole stretcher bricks around the other edge. Inside the eastern half of the feature, the bricks tended to be parallel to the long axis of the feature, while in what remains of the western half they are rotated 90°. Again, the majority (two-thirds) of the bricks on the interior are whole bricks and the remaining third are half bricks scattered throughout.

The third horizontal course of bricks is extant only in the eastern half and northern edge of the feature. Again, stretcher bricks form the outer border and are all whole. In the interior, the bricks in the northern half are all oriented with their long axes paralleling that of the feature, while those in the southern half are perpendicular to the others. The number of whole bricks and fragmentary bricks utilized in this course was about even. The fragmentary bricks were either half or three-quarter sized.

Courses 4 and 5 were highly fragmentary. Both exhibited whole stretcher bricks around their outer edges. In the interior of Course 4, most of the bricks were laid with their long axes perpendicular to that of the feature; there were a few in the southeastern corner oriented parallel to the long axis of the feature. The number of whole and fragmentary





Figure 35. Feature 7 completely exposed.

bricks utilized on the interior of Course 4 was approximately even. Course 5 only had a few bricks extant along the eastern edge of the feature, all perpendicular to the long axis of the feature.

Two short brick walls at the northwestern and southwestern corners of the feature connected the platform to the east wall of the structure. The northern wall angles to the northwest at 30° west of North, forming a straight line between the northeastern corner of Feature 1--East Wall/Section A and the northwestern corner of Feature 7. It is 98.5 cm long, 30 cm wide, 25 cm high, and composed of three horizontal courses of brick. The basal course of bricks was laid directly on the yellowish brown sand subsoil and is composed of six header bricks on the northern side with four stretcher bricks south of this line. All of the bricks in the basal course are whole. The second course is composed of 11 bricks, all of which run parallel to the long axis of the wall. Although several fragmentary bricks filled gaps at either end of the wall, the rest of the bricks were whole. The third and top course of bricks is present only in the eastern half of the wall. All of the bricks were whole and laid with their long axes paralleling that of the wall.

The southern connecting wall angles to the southwest at 60° south of West, forming a straight line between the southwestern corner of Feature 7 and the southeastern corner of the structure. It is 1.10 m long, 32 cm wide, 25 cm high, and composed of three horizontal courses of brick. The eastern end (approximately 30 cm) of the wall was truncated before excavation. As with the rest of the feature, the basal course of bricks was laid directly onto the yellowish brown sand subsoil. Fifteen whole bricks laid perpendicular to the long axis of the wall form the basal course. The second course was composed of stretcher bricks along the southern wall with header bricks directly north of this line. All of the bricks were whole. Only the eastern half of the third course was still in situ. The bricks utilized in this course were all whole and oriented parallel to the long axis of the wall. Faint traces of lime mortar used in bonding the bricks of Feature 7 were encountered sporadically as the feature was dismantled.

The trapezoidal area between Features 1 and 7 contained two distinct types of fill. Along the northern connecting wall there is a 20 cm wide band of strong brown (7.5YR4/6) sand with a large amount of brick rubble intermixed. South of this is a zone of dark yellowish brown (10YR5/6) sand. In the southern 1 m of this area, the dark yellowish brown sand is replaced by strong brown (7.5YR4/6) sand with a moderate amount of brick fragments and charcoal intermixed. The area between the two features had a flat floor and was 25 cm deep. Artifacts recovered from Feature 7 are listed in Appendix 2.

#### Feature 8 (Figures 2, 27, 28, 31, 32)

Feature 8 comprises the basal three courses of an internal brick feature. It was located in Units 17 (S22 W10), 18 (S20 W10), and 24 (S20 W8) and originated in Level 4. The three courses, which were still in situ, were laid in the English common bond style so as to form a 13 in. (33.0 cm) wide wall (McKee 1973:51). Only whole bricks were utilized in the construction of this feature and they were set with lime mortar. The bricks measure approximately 19.0 cm (7.5 in.) by 9.5 cm (3.75 in.)

by 6.4 cm (2.5 in.) and all were soft-fired. Slight traces of lime mortar were encountered between the two lowest courses of bricks only. No evidence of a builder's trench was found, and the bricks were laid directly onto the yellowish brown (10YR5/6) sand comprising Level 5. The long axis of the feature was oriented approximately 13° north of East, paralleling the southern wall of the structure. The removal of a tree (see description of Unit 24) appears to have destroyed an undetermined portion of the feature's eastern end.

While analysis of the function of Feature 8 is deferred to the section dealing with the structural analysis of 22Lo741, several additional statements concerning the feature in general are appropriate at this point. The feature sits at a higher level than any of the foundation walls of the structure, suggesting that it did not function as an internal support feature. Furthermore, it was directly associated with Feature 16, a burned zone in Units 17 (S22 W10), 18 (S20 W10), 20 (S22 W12), and 21 (S20 W12).

The measurements of the feature are as follows.

Length: 1.60 m E/W  
Width: 0.32 m N/S  
Maximum Depth: 0.20 m

#### Feature 9 (Figures 2, 22, and 23)

Feature 9 is a large, deep, anomalous feature located off the northwest corner of the structure. Although only a partial cross section of the feature was obtained, it appears to have been subrectangular in plan. Probing indicated that although the north/south profile did not reach the northern end of the feature, it did roughly bisect it. Approximately 60% of the feature was not excavated, consisting of the northern third and the eastern half of the feature.

The feature consists of two sections that were excavated as a single unit: 1) the upper "bathtub" shaped section, and 2) the oval shaft extending out of the bottom of the upper section. The excavated upper portion of the feature measured 2.5 m long (N/S), 2.04 m wide (E/W), and 1.0 m deep. Probing of the profile walls indicated that the feature extended an additional 76 cm to the east and 92 cm to the north, where it was abruptly truncated by disturbed soils. This gives the feature a total size of 3.42 m (N/S) by 2.8 m (E/W). The western edge turned inward at an approximate 60° angle, dropping 58 cm at the southern end and 40 cm at the northern end, where the side of the feature extended straight down for an additional 38 cm (see Figure 6). The floor of this portion of the feature was flat. The matrix of the feature was a uniform dark brown (10YR3/3) sand with a few faint lenses of brown to dark brown (10YR4/3) sand, several patches of brown (10YR5/3) sand, a relatively small amount of brick rubble (approximately 20%); chunks of charcoal were interspersed throughout the fill. In contrast, the northern end of

the feature's cross section contained a small zone of black (10YR2/1) greasy sand and charcoal, the top of which lay 58 cm below the top of the feature, measuring 44 cm (E/W) by 40 cm (N/S). The uniformity of the matrix suggests a relatively rapid filling of the feature.

Extending below the upper "bathtub" shaped section of the feature and located in its center is an oval shaft. The excavated portion measured 1.0 m (N/S) by .95 m (E/W) and is 1.57 m deep. Probing of the feature's east profile indicated that the shaft extended an additional 40 cm further east, giving it a total east-west width of 1.35 m. The edges of the shaft are straight except for the north edge, which tapers inward 20 cm one-third of the way down from the top of shaft, and at two-thirds of the way down it tapers an additional 18 cm inward. It has a very slightly rounded bottom. The fill of the shaft was nearly identical to that of the upper portion of the feature, consisting of a uniform dark brown (10YR3/3) sand with brick rubble and charcoal pieces intermixed. At a point between 45 cm and 65 cm from the bottom of the feature, the matrix shifts abruptly to a brown (10YR5/3) slightly clayey sand. This basal portion of the feature fill was devoid of artifacts.

#### Feature 10 (Figures 2, 28, 29, 36-38)

Feature 10 consists of the remains of an internal wooden wall or support feature and an associated underlying discoloration designated as Subfeature 1. The feature was located in Units 19 (S18 W10), 22 (S18 W12), and 26 (S18 W8). Feature 10 extended westward from the approximate midpoint of Feature 1--East Wall near the junction of the brick and wooden portions of Feature 1. It originated in Level 4 and penetrated Level 5 (Subfeature 1 only). The wooden remains were composed of charred and fragmented boards. In plan, the feature appeared as a linear dark brown (10YR4/3) silty sand discoloration containing small charcoal and brick fragments bordered by a thin (1-3 cm) band of charcoal. The small brick fragments composed approximately 10% of the matrix. Under this matrix lie the fragmentary remains of at least three charred boards, two of which lie flat and side-by-side, while the third slopes upward, giving the feature a shallow, asymmetrical basin shape in profile (Figure 12). The boards are 22-24 cm (8.7-9.4 in.) wide and 2-3 cm (0.8-1.2 in.) thick. Although no complete lengths of board were extant, one section 1.8 m in length was recovered; it did not display any cut ends. A single fragment of a 10 cm (3.9 in.) wide cross-member tying the three boards together was recovered from the western end of the feature. The boards rested in a matrix of dark brown (10YR4/3) silty sand.

Subfeature 1 lay beneath and parallel to the boards and consisted of a gray (10YR5/1) sand heavily mottled with yellowish brown (10YR5/4 and 10YR5/6) sand. The profile is basin shaped and the edges are clearly defined. The long axis of the feature and the subfeature is oriented 12° north of East, paralleling the other east-west trending walls of the

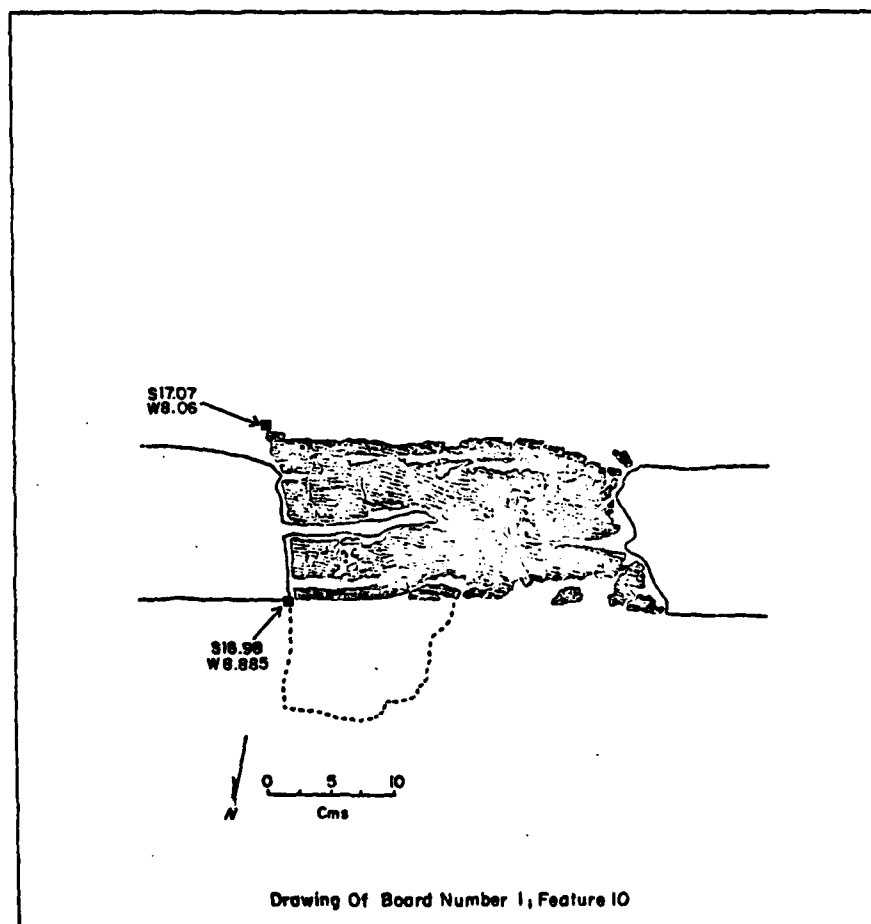


Figure 36. Board 1, Feature 10.

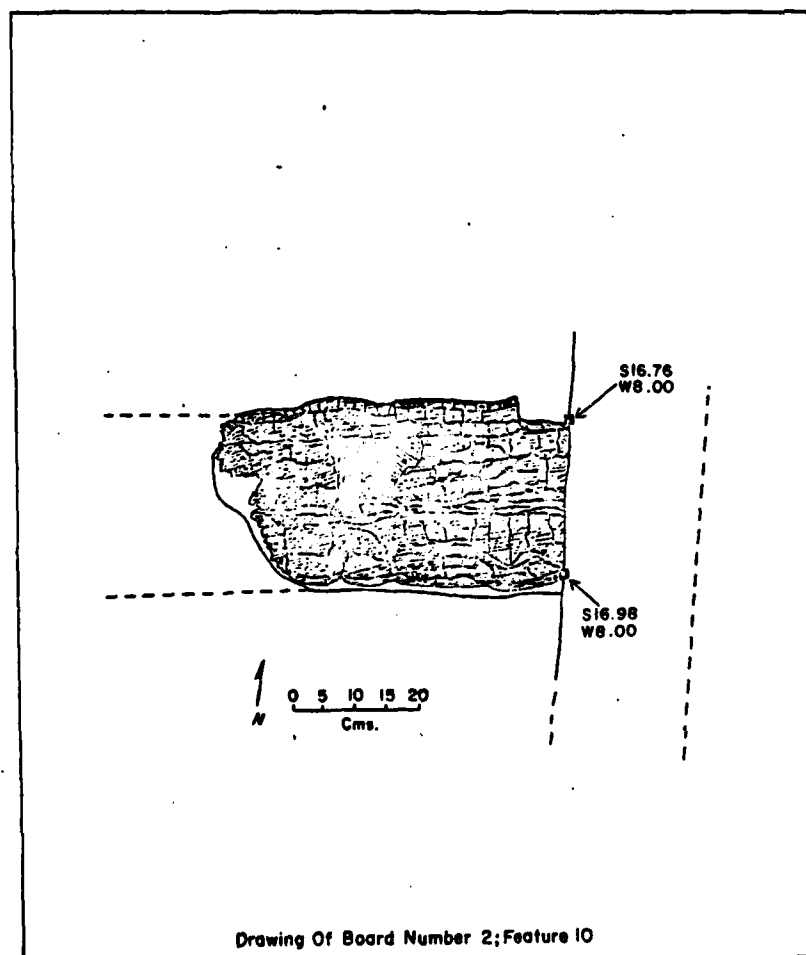


Figure 37. Board 2, Feature 10.

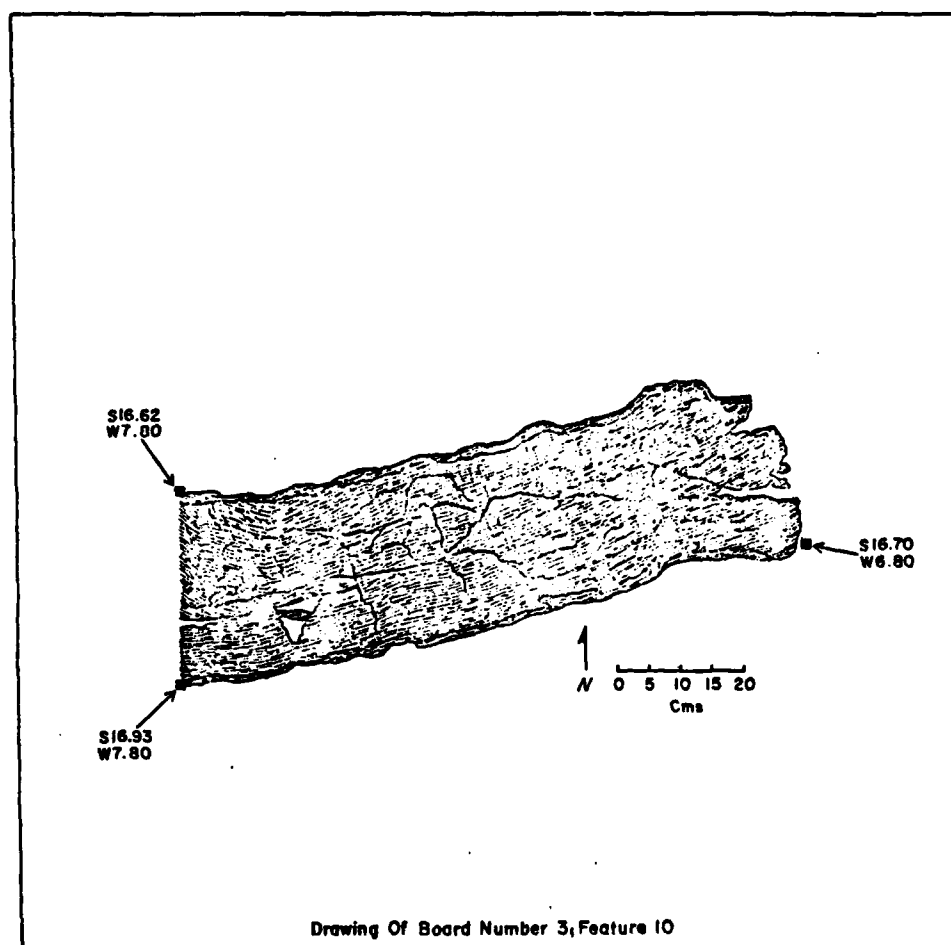


Figure 38. Board 3, Feature 10.

structure. The base of the wooden section of Feature 10 rests at the same level as the original nineteenth century ground surface, while Subfeature 1 penetrates Level 5. Subfeature 1 is interpreted as the builder's trench associated with the wall. The western end of the feature was truncated by recent disturbance.

The Appendix 2 lists artifacts recovered from the feature. The measurements of Feature 10 are as follows.

Wooden Section	Length: 4.18 m E/W
	Width: 0.37 M N/S
	Maximum Depth: 0.15 m
Subfeature 1	Length: 4.95 m E/W
	Width: 0.93 m N/S
	Maximum Depth: 0.30 m (below base of the wooden section)

#### Feature 11 (Figures 2, 30, and 33)

Located entirely within Unit 26 (S18 W8) and originating in Level 4, Feature 11 is another internal brick feature. It consists of a single vertical course of bricks four courses wide. Orientation of the long axis of the feature parallels the other east-west trending structural features at approximately 12° north of East. A combination of whole bricks (5) and fragmentary half-bricks (19) was utilized to construct this feature, which rested directly on the surface of a dark grayish brown (10YR4/2) sand with patches of dark yellowish brown (10YR4/4) sand composing the interface between the nineteenth century A1 and A2 soil horizons. The Level 4 midden surrounds the feature on all sides. There was no evidence of a builder's trench or other such preparation of the subsoil.

The measurements of the feature are as follows.

Length: 0.88 M E/W
Width: 0.43 m N/S
Maximum Depth: 0.08 m

#### Feature 12 (Figures 2 and 39)

Feature 12 is a square post hole and associated postmold located in Unit 14 (S20 W6). In plan, the post hole is square and in profile, it exhibits gently tapering sides and a rounded bottom. A dark yellowish brown (10YR3/6) sand with a minor amount of small charcoal flecks and brick fragments mottled with a yellow (10YR8/6) sand composed the matrix of the post hole. Its outer boundaries were clearly defined. The postmold was centrally located within the feature. It also was square in plan, but in profile it had straight sides with a rounded



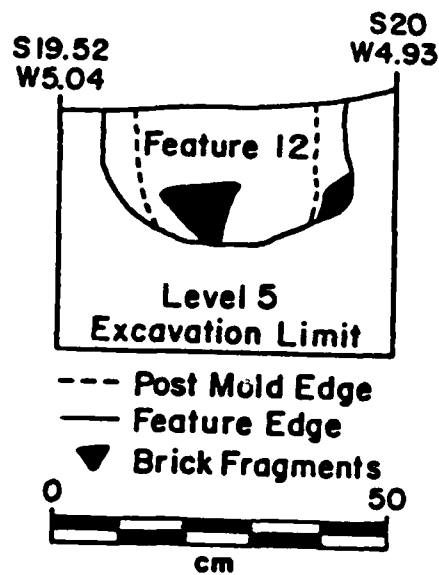


Figure 39. Feature 12 (postmold) profile.

bottom, which coincided with the bottom of the post hole. A uniform dark yellowish brown (10YR3/6) sand with a minor amount of small charcoal flecking and brick fragments composed the matrix of the postmold. The feature did not appear until the southern end of Feature 1 had been completely removed; it lay 30 cm north of the southeastern corner of the structure and entirely within Level 5. The north-south axis of the feature was oriented 130° west of North.

The measurements of the two sections are as follows.

Post Hole	Length: 0.36 m N/S
	Width: 0.40 m E/W
	Maximum Depth: 0.23 m

Postmold	Length: 0.24 m N/S
	Width: 0.28 m E/W
	Maximum Depth: 0.23 m

Appendix 2 lists artifacts recovered from Feature 12.

#### Feature 13 (Figures 2 and 40)

Located in Unit 28 (S22 W6), Feature 13 is an oval post hole displaying three discrete sections in plan. The sections have been designated as Zones 1, 2, and 3. Zone 1, the post hole proper, is oval in plan and exhibits one straight and one tapering side with a rounded bottom in profile. The matrix consists of a dark yellowish brown (10YR3/4) sand containing charcoal flecks and small brick fragments. The outer boundaries were clearly defined. Zone 2 consists of the postmold proper. In plan, it was circular and was located in the approximate center of the feature; it was not discernible in profile. The matrix of Zone 2 consists of a dark yellowish brown (10YR3/4) sand devoid of charcoal flecking and brick fragments. Zone 3 consists of a small oval area of brick rubble located on the western edge of Zone 2. The brick rubble was intermixed with a minor amount of yellowish red (5YR5/8) sand. This zone appears to have acted as chinking to support the post. The long axis of Feature 13 runs east-west along a line 130° north of East. Like Feature 12, Feature 13 was stratigraphically below Feature 1 and lay wholly within Level 5.

The measurements of the three zones are as follows.

Zone 1	Length: 0.36 m
	Width: 0.27 m
	Maximum Depth: 0.40 m

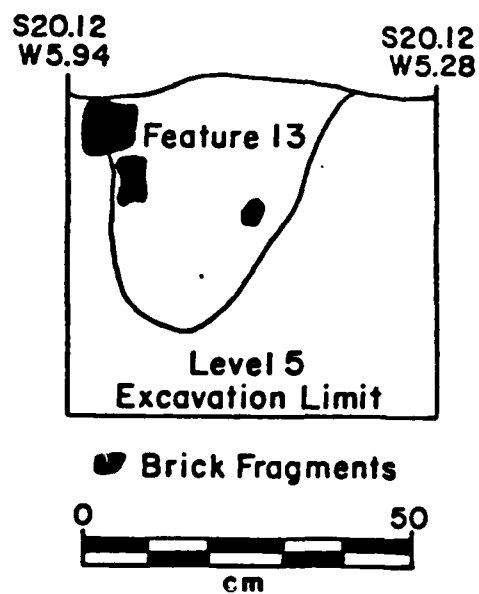


Figure 40. Feature 13 (postmold) profile.

Zone 2      Length: 0.18 m N/S  
             Width: 0.18 m E/W  
             Maximum Depth: Indeterminate

Zone 3      Length: 0.24 m N/S  
             Width: 0.12 m E/W  
             Maximum Depth: 0.17 m

The only artifacts associated with the feature were the small, soft-fired brick fragments mixed in the feature matrix. They were not saved.

#### Feature 14 (Figure 4)

Feature 14 is the truncated basal remnants of a postmold located on the south side of Feature 7 near the southern wall of Unit 12 (S20 W4). In plan, it appears to have been subrectangular to almost square in shape. The profile of the bottom of the postmold exhibits straight sides with a tapered, gently rounded bottom. A dark grayish brown (10YR4/2) slightly clayey sand composed the matrix of the feature. Although the level of origin of the feature is indeterminate, the extant portion lay entirely within Level 5.

The measurements of the feature are as follows.

Length: 0.44 m N/S (partial measurement)  
Width: 0.48 m E/W  
Maximum Depth: 0.30 m

The only artifacts recovered from the feature were two small (5-10 cm diameter) soft-fired brick fragments. They were not saved.

#### Feature 15 (Figures 2, 32, and 33)

Feature 15 is a post hole with an associated post located near the junction of the wooden and brick sections of the builder's trench associated with Feature 7 and the east side of Feature 1 (Figure 4). The western edge of the feature abutted Feature 1. Although the feature appears to have originated in the same level as Feature 1, a clear outline of the feature did not appear until approximately 15 cm of sand were removed. It was almost square in shape, measuring 50 x 42 cm, and the long axis was oriented approximately 12° west of North. The matrix was composed of a light yellowish brown (10YR6/4) to slightly yellow sand. The feature produced the rotted remnants of a wood post approximately 35 cm long. It was a fairly small rectangular piece of wood 15 x 10 cm and appeared to have been tapered at the distal end. In a futile attempt to preserve the post, it was removed in a block of earth.

The full extent of Feature 15 was discovered late in the afternoon on the last day of excavation as the walls of the structure were being

dismantled. Because of the time constraint, the crew quickly dug the feature out without profiling. It had straight sides and what appeared to be a rounded bottom. This feature is interesting because it produced a large number of olive green glass fragments from an alcoholic beverage bottle, including a portion of the base (Glass Vessel 13). This vessel has been dated to the period between ca. 1820 and 1850-60 (see Internal Correlations section). Artifacts recovered from Feature 15 are listed with Unit 16 in Appendix 2.

#### Feature 16 (Figures 2, 23. and 27)

Feature 16 is a large, (1.9 m E/W by 1.6 m N/S) ovoid, burned zone in the southwestern corner of the site. Before excavation, this feature was almost completely exposed at the surface, only the eastern third remained buried. Because its exact nature was undetermined before excavation of this portion of the site and because artifacts were eroding out of its surface, it was initially designated as Area 1. The feature lay at the junction of Units 17, 18, 20, and 21.

The eastern edge was somewhat irregular and poorly defined, particularly in Unit 18. The western boundary was sharply defined, primarily because Level 4 had been completely truncated in this part of the site. The feature's red fill stood in stark contrast to the surrounding yellowish brown silty sand. The matrix was largely composed of a red (2.5YR4/8) silty sand, although there was a 20 cm thick zone of reddish brown (5YR4/4) silty sand 60 cm to 1 m wide along the eastern edge of the feature; it bottomed out at the Level 4a/4b interface. The base of the feature was flat, and in profile the edges were nearly vertical. Over most of its extent, Feature 16 was 30 cm deep, except along its eastern extent, which was 20 cm deep. The lower 10 cm of the western section was diffuse and heavily leached.

A small brick concentration in the northeastern edge of the feature on its surface consisted of an oval area of highly fragmented brick measuring 65 x 38 cm; the long axis was oriented between 25° and 30° west of North. The brick fragments averaged 5-10 cm on a side. There were several larger half-bricks in addition to a large number of small fragments less than 3 cm in diameter. No other artifacts were present within the confines of the concentration. The bricks lay almost entirely on the surface, penetrating no more than 3-5 cm into its surface. The positioning of the bricks clearly indicated that they were the in situ remains of a nineteenth century feature. The area was capped with in situ Level 4a. Even though it is an in situ cluster of brick fragments, none appeared to form any sort of alignment.

Feature 16 contained a moderate amount of artifactual debris. Most of the artifacts recovered were either metal fastening devices (nails, spikes) or prehistoric aboriginal chipping debris. The historic artifacts were recovered from the upper 10 cm of the feature. Feature 16 has been tentatively identified as a heavily damaged forge. The area

had clearly been severely affected by long exposure to heat, as evidenced by the feature's color. It also had clearly defined edges and was structurally associated with Feature 8, an internal brick line not associated with the walls of the structure. The hypothesis that Feature 16 originated from the burning of boards and other wood after the abandonment of the structure was investigated but rejected on the basis of the artifacts recovered from the feature. Secondly, the density of nails and other artifacts was not high. This coupled with the overall configuration of the feature and the fact that a number of artifact types associated with forging activities were recovered from the vicinity of the feature suggests that it functioned as a forge. Artifacts recovered from this feature are listed under the associated excavation units in Appendix 2.

#### APPENDIX 4 PREHISTORIC COMPONENT

The prehistoric component at 22Lo741 is treated as a discrete entity for several reasons. First and foremost, it is the minor component at the site and is represented by a very small number of artifacts. Additionally, the historic period utilization of the site so heavily disturbed this component that it can only be placed within a general temporal and functional framework. The combination of small sample size, a general lack of temporally diagnostic artifacts, and the disturbance of the component make it exceedingly difficult to produce meaningful statements concerning the use of the site in the prehistoric period.

Virtually none of the prehistoric remains recovered during the excavation were found in undisturbed prehistoric deposits. The material that can be ascribed to the site was recovered from Levels 3 and 4 and the associated historic features. Although prehistoric remains were recovered from Level 4 outside of the structure and from Level 4b inside the structure, they were consistently associated with historic period artifacts. Nineteenth century construction activities destroyed the prehistoric component here, suggesting that originally the prehistoric remains were concentrated in the upper 20-30 cm of the soil profile. Because of the high potential for extreme lateral movement of artifacts within the navigation channel right-of-way (see Hambacher 1982), the artifacts recovered from the surface could not be positively associated with the prehistoric occupation of the site. They were duly noted and then deleted from the sample.

The placement of the site within a temporal framework relies on a very small number of artifacts. Most of the assemblage is composed of chert debitage, fragments of a few bifacially flaked tools, and materials from disturbed contexts, all temporally nondiagnostic. But there was a small group of ceramic body sherds associated with the site that included six Baldwin Plain var. Blubber sherds, five from the Feature 10 builder's trench (Subfeature 1) and one from Level 4b in Unit 13, and one Mulberry Creek Plain var. Dead River sherd from Level 4 in Unit 6 that are temporally diagnostic.

The recent reclassification of the Baldwin Plain and O'Neal Plain types (Jenkins 1981) has reordered both the classificatory and temporal placement of these ceramics. Because of "difficulties in the sorting of the sand tempered type O'Neal Plain from Baldwin Plain" (Jenkins 1981:123) the type O'Neal Plain has been reclassified as a variety of Baldwin Plain. Baldwin Plain var. O'Neal and var. Baldwin are identified on the basis of rim attributes, while Baldwin Plain var. Blubber and var. Lubbub refer to body sherds and are separated on the basis of the grain size of the sand tempering (Jenkins 1981:123-124).

The only variety of Baldwin Plain present at 22Lo741 was var. Blubber. On the basis of the excavation conducted in the Gainesville Lake Area of the Tennessee-Tombigbee Waterway (Jenkins 1981) this variety has been broadly assigned to the Miller period (ca. 100 BC-AD 1000). While var. Blubber shows little morphological change throughout the Miller period, the frequency of its occurrence does fluctuate. It is a dominant variety along with its fabric and cord marked counterparts throughout the Miller I phase (ca. 100 BC - AD 300) (Jenkins 1981:124). During the Miller II phase (ca. AD 300- AD 550) Baldwin Plain is replaced gradually by Baytown Plain. Var. Blubber again becomes a dominant variety during the Miller IIIa subphase (AD 600 - AD 700) and fading by the Early Miller IIb subphase (AD 700 - AD 900) (Jenkins 1981:25-26).

The only other ceramic type than can definitely be associated with the bench on which 22Lo741 sits is the single sherd of Mulberry Creek Plain var. Dead River. This is the only variety of Mulberry Creek Plain present in the Tombigbee drainage and it is most common during the Late Miller II subphase (ca. AD 450 - AD 600), decreasing in frequency throughout the Early Miller III subphase (ca. AD 550 - AD 900) (Jenkins 1981:151-152). Outside of the Tombigbee Valley Mulberry Creek Plain ceramics appear to date somewhat earlier, falling within the period between 300 BC and AD 100 in the Middle Tennessee River (Walthall 1980:112).

The single Alexander Pinched var. Prairie Farms body sherd recovered from the surface of the site can be broadly assigned to the Henson Springs phase (ca. 500 BC - 100 BC) of the Late Gulf Formational period (Jenkins 1981:19, 113). As noted above this sherd can not definitely be associated with the prehistoric occupation of 22Lo741.

Based on the presence of the two ceramic types which can be associated with the prehistoric occupation of 22Lo741 it would appear that the site was utilized sporadically between the Miller I phase (ca. 100 BC - AD 300) and the Early Miller II subphase (AD 300 - AD 400).

Functionally, the small prehistoric utilization of 22Lo741 is similar to that of the other two prehistoric sites in the area, 22Lo735 and 22Lo740 (Hambacher 1982). It functioned minimally as a short-term camp for tool manufacture and probably hunting, as evidenced by the large amount of chipping debris and the biface fragments. Debitage from all stages of the manufacturing process were present in addition to a core and several, unfinished, bifacially flaked tool forms. The raw material, Tuscaloosa gravel and Camden chert, could have been easily obtained from the nearby Tombigbee River. The single well-worn biface fragment from Feature 10 is the sole evidence for utilized cutting tools. The prehistoric utilization of 22Lo741 was another part of a general, long term, spodic utilization of the length of the Holocene terrace throughout the Archaic, Woodland, and Historic periods.



## REFERENCES CITED

American Cyclopedica

1874 Cotton. American cyclopedia. Volume 5, p. 405.

Adams, William Hampton, editor

1980 Waverly plantation: ethnoarchaeology of a tenant farming community. A report submitted to the Heritage Conservation and Recreation Service and the U.S. Army Corps of Engineers, Mobile District under Contract # C-55026(79). Resource Analysts, Inc., Bloomington, Indiana.

Adams, William Hampton, Steven D. Smith, David F. Barton, Timothy B. Riordan, and Stephen Poyser

1981 Bay Springs Mill: historical archaeology of a rural Mississippi cotton milling community. A report submitted to the National Park Service and the U.S. Army Corps of Engineers, Nashville District under Contract # C-07009 (79). Resource Analysts, Inc., Bloomington, Indiana.

Anonymous

1980 Sorting criteria for ceramics. Unpublished code sheet for pre-historic ceramics. Department of Anthropology, Mississippi State University, Mississippi State, Mississippi.

Brooks, C. P.

1898 Cotton: its uses, varieties, fibre, structure, cultivation, and preparation for the market and as an article of commerce, also the manufacture of cotton seed oil, cotton seed meal, and oil pressing in the United States. Spon and Chamberlain, New York.

Brose, David S., William C. Johnson, and Michael J. Hambacher

1978 The East Wall Site, 33Ab40, Ashtabula County, Ohio. A report on file with the Cleveland Museum of Natural History, Cleveland, Ohio.

Burkett, Charles William, and Clarence Hamilton Poe

1908 Cotton: its cultivation, marketing, manufacture, and the problems of the cotton world. Doubleday, Page, New York.

Chaffers, William

1946 Marks and monograms on European and Oriental pottery and porcelain (fourteenth revised edition). Border Publishing, Los Angeles.

1965 Marks and monograms on European and Oriental pottery and porcelain (fifteenth revised edition). William Reeves, London.

Clark, Ross C.

1972 The Woody Plants of Alabama. Missouri Botanical Garden Press, St. Louis, Missouri.

- Cleland, Charles E., and Kim A. McBride, editors  
 n.d. Oral Historical, Documentary, and Archaeological Investigation of Barton and Vinton, Mississippi: An Interim Report on Phase III of the Tombigbee Historic Townsites Project. A report submitted to the National Park Service, Mid-Atlantic Region under Contract # CX4000-3-0005. Michigan State University Museum, Anthropology Division, East Lansing, Michigan.
- Cushion, J. P., and W. B. Honey  
 1965 Handbook of pottery and porcelain marks. Faber and Faber, London.
- Davis, William C., editor  
 1981 Shadows of the storm: Volume 1 of the image of war 1861-1865. National Historical Society, Gettysburg, Pennsylvania.
- Demeter, C. Stephen, and William Lowery  
 1977 Archaeological and historical investigation at the Berrien Springs Jail site. The Michigan Archaeologist 23(2-3):35-114.
- Doster, James F., and David C. Weaver  
 1981 Historic settlement in the Upper Tombigbee Valley. A report submitted to the Heritage Conservation and Recreation Service, Albuquerque under Contract # C-5714 (78). The Center for the Study of Southern History and Culture, University of Alabama, University, Alabama.
- Elliott, Jack D., Jr.  
 1978 A cultural resources survey of selected construction areas in the Tennessee-Tombigbee Waterway: Alabama and Mississippi (Volume II). A report submitted to the U.S. Army Corps of Engineers, Mobile District under Contract # DACW01-76-0189. Department of Anthropology, Mississippi State University, Mississippi State, Mississippi.
- Ensor, H. Blaine  
 1981 Gainesville Lake area lithics: chronology, technology, and use. Archaeological investigations in the Gainesville Lake area of the Tennessee-Tombigbee Waterway, Volume 2. Report of Investigation Number 12, Office of Archaeological Research, University of Alabama, University, Alabama.
- Ford, James A., and George I. Quimby  
 1945 The Tchefuncte culture, an early occupation of the Lower Mississippi Valley. Memoirs of the Society for American Archaeology 2. American Antiquity 10(3), part 2.
- Fordyce, J. R.  
 1906 Cotton ginning machinery. In The Americana 1903-1906 (Volume 5).
- Godden, Jeffrey A.  
 1964 Encyclopedia of British pottery and porcelain marks. Bonanza Books, New York.
- Grosscup, Gordon L.  
 1968 Excavations at the Walker Tavern, Cambridge State Historical Park, 1968. Report submitted to the Michigan Department of Conservation.

Grosscup, Gordon L.

- 1972 Review of the Excavation of the Arkansas Post Branch of the Bank of the State of Arkansas, Arkansas Post National Memorial, by John W. Walker. Historical Archaeology 6:113-114.

Hambacher, Michael J.

- 1982 Report on an archaeological survey for historic sites in Disposal Areas C-6 and C-7 and Waterway Channel, Columbus Lake, Tombigbee Multi-Resource District, Alabama and Mississippi. Report submitted to the National Park Service, Mid-Atlantic Region under Change Order #3 of Contract # C-07026. Michigan State University Museum, Anthropology Division, East Lansing, Michigan.

Jenkins, Ned J.

- 1981 Gainesville Lake area ceramic description and chronology. Archeological Investigations in the Gainesville Lake area of the Tennessee-Tombigbee Waterway, Volume 3. Report of Investigation Number 13, Office of Archaeological Research, University of Alabama, University, Alabama.

Jones, Olive

- 1971 Glass bottle push-ups and pontil marks. Historical Archaeology 5:62-73.

Kovel, Ralph M., and Terry H. Kovel

- 1953 Dictionary of marks--pottery and porcelain. Crown, New York.

Lewis, T. M. N., editor

- 1955 The Hamilton and Eva Point Types. Bulletin of the Oklahoma Anthropological Society 3:69-70.

Little, W. L.

- 1969 Staffordshire Blue: Underglaze Blue Transfer-printed Earthenware. Crown Publisher, Inc., New York.

Lofstrom, Edward U.

- 1976 A seriation of historic ceramics in the Midwest, 1780-1870. Paper presented at the Joint Plains-Midwest Anthropological Conference.

Lorrain, Dessamae

- 1968 An archaeological guide to 19th century American glass. Historical Archaeology 2:35-44.

Lowndes County Deed Books

Lowndes County Deed Books 2, 4, 26-28, 30. Lowndes County Courthouse, Columbus, Mississippi.

McKearin, Helen, and Kenneth M. Wilson

- 1978 American bottles and flasks and their ancestry. Crown, New York.

McKee, Harley J.

- 1973 Introduction to early American masonry, stone, brick, mortar, and plaster. National Trust for Historic Preservation, Washington, D. C.

Michigan State University Museum

- 1979a A technical proposal for archaeological investigation at Colbert, Barton, and Vinton townsites: Barton Ferry Recreational Area, Tombigbee River Multi-Resource District, Clay County, Mississippi. Submitted to Interagency Archeological Services-Atlanta, Heritage Conservation and Recreation Service. On file at Michigan State University Museum, Anthropology Division, East Lansing, Michigan.
- 1979b Supplement to a technical proposal for archaeological investigations at Colbert, Barton, and Vinton townsites: Barton Ferry Recreational Area, Tombigbee River Multi-Resource District, Clay County, Mississippi. Submitted to Interagency Archeological Services-Atlanta, Heritage Conservation and Recreation Service. On file at Michigan State University Museum, Anthropology Division, East Lansing, Michigan.
- 1980 Archaeological mitigation of Site 22Lo741, Columbus Lake, Tombigbee River Multi-Resource District, Alabama and Mississippi. Proposal submitted to Interagency Archaeological Services-Atlanta, Heritage Conservation and Recreation Service. On file at Michigan State University Museum, Anthropology Division, East Lansing, Michigan.

Minnerly, W. Lee, editor

- 1982 Oral Historical, Documentary, and Archaeological Investigations of Colbert, Barton, and Vinton, Mississippi: An Interim Report on Phase I of the Tombigbee Historic Townsites Project. A report submitted to the National Park Service, Southwest Region under Contract # C-07026. Michigan State University Museum, Anthropology Division, East Lansing, Michigan.
- n.d. Oral Historical, Documentary, and Archaeological Investigations of Barton, and Vinton, Mississippi: An Interim Report on Phase II of the Tombigbee Historic Townsites Project. A report submitted to the National Park Service, Mid-Atlantic Region under Contract #CX4000-3-0005. Michigan State University Museum, Anthropology Division, East Lansing, Michigan.

Munsey, Cecil

- 1970 The illustrated guide to collecting bottles. Hawthorn Books, New York.

Nelson, Lee H.

- 1963 Nail chronology as an aid to dating old buildings. Association for State and Local History Leaflet 15.

Noel Hume, Ivor

- 1968 Historical archaeology. W. W. Norton, New York.
- 1969 A guide to artifacts of colonial America. Alfred A. Knopf, New York.

Philips, Philip

- 1970 Archaeological survey in the Lower Yazoo Basin, Mississippi, 1949-1955. Papers of the Peabody Museum of Archaeology and Ethnology 60. Harvard University, Cambridge.

Price, Cynthia R.

- 1979 19th Century ceramics in the eastern Ozark Border region. Center for Archaeological Research. Southwest Missouri State University, Monograph Series 1.

Shaw, Simeon

- 1829 History of the Staffordshire potteries: and the rise and progress of the manufacture of pottery and porcelain; with references to genuine specimens, and notices of eminent potters. Photostatic reprint (1970) by Praeger, New York.

South, Stanley

- 1964 Analysis of the buttons from Brunswick Town and Fort Fisher. Florida Anthropologist 17:113-114.

- 1972 Evolution and horizon as revealed in ceramic analysis in historical archaeology. The Conference on Historic Site Archaeology Papers 6 (part 2):71-106.

- 1977 Method and Theory in historical archeology. Academic Press, New York.

Spivey, T., C. Ferring, D. Crouch, and K. Franklin

- 1977 Archaeological investigations along the Wanrika pipeline. Contributions of the Museum of the Great Plains 5. Lawton, Oklahoma.

Switzer, Ronald R.

- 1974 The Bertrand bottles: a study of 19th century glass and ceramic containers. National Park Service, Washington, D. C.

Tomkins, D. A.

- 1901 Cotton and cotton oil. Published by the author, Charlotte, North Carolina.

Walker, John W.

- 1971 Excavation of the Arkansas Post Branch of the Bank of the State of Arkansas. Office of Archaeology and Historic Preservation, National Park Service, U.S. Department of the Interior. Southeast Archaeological Center, Division of Archaeology.

Walthall, John

- 1980 Prehistoric Indians of the Southeast. University of Alabama Press, University, Alabama.

Weaver, David C. and James F. Doster

- 1982 Historical Geography of the Upper Tombigbee Valley. A report submitted to the Heritage Conservation and Recreation Service, Albemarle under Contract # C-5714 (78). The Center for the Study of Southern History and Culture, University of Alabama, University, Alabama.

Webb, William S., and David L. DeJarnette

- 1948 The Flint Run Site, Ma 48. Alabama Museum of Natural History, Museum Paper 23, University, Alabama.

White, Anta M., L. R. Binford, and Mark Papworth, editors

- 1963 Miscellaneous Studies in Typology and Classification. University of Michigan Museum of Anthropology Anthropological Papers 19. University of Michigan, Ann Arbor, Michigan.

Wilson, Kenneth M.

1972 New England glass and glassmaking. Thomas Y. Crowell, New York.

Wimberly, Steve G., and Harry A. Tourtelot

1941 The McQuorquodale Mound: a manifestation of the Hopewellian phase in South Alabama. Alabama Museum of Natural History, Museum Paper 19. University, Alabama.

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